Q. What does that exhibit show, Mr. Darling?

A. That shows the estimated and actual costs of sub- and superstructure of various bridges constructed on the Northern Pacific system between the years 1904 and 1909, inclusive, and represents a total cost of about $3,444,000.

Q. And shows substantially the same information that is shown in the exhibit last introduced?

A. Yes, sir.

Q. The items of cost being distributed in the same way?

A. Yes, sir.

Q. I do not think you need to spend time developing the details of that, because it will speak for itself. Take the next item, No. 6, Ties. You show here 3,089.93 miles of main track, 3,000 ties per mile.

A. Yes, sir.

Q. Does that fairly represent the number of ties in each mile of track?

A. Yes, sir.

Q. At the present time?

A. Yes, sir.

Q. Branches, sidings and yards, 5,061.63 miles at 2880 ties per mile, exclusive of turnouts and crossings?

A. Yes, sir.

Q. That is correct as to the branches, sidings and yards?

A. Yes, sir.

Q. Making a total of 23,847,285 ties?

A. Yes, sir.

Q. How much do you charge per tie?

A. An average of 55 cents per tie for the material delivered on board cars, including peeling and handling, plus the cost of transportation, an average of 200 miles, at 14 cents per 100 pounds—which is the tariff rate—making a total for transportation of 25 cents, or a total cost per tie delivered on board cars of 80 cents.

Q. Assuming what kind of ties now?

A. The average ties as we get them.

Q. And included in that average would be what kind of ties?

A. Oak, fir, tamarack, pine, hemlock, some birch, and a few other scattering kinds.

Q. Rails—explain briefly how you have arrived at the detail of that item?

A. The basis of cost of rails is $31 per ton. That in-

cludes $28 at the mill, plus the inspection, plus $1.75 freight from Chicago to St. Paul, plus $1 per ton for handling in transit and in the yard. In addition to that we have an item of transportation of $13 per ton, which is the tariff rate on rails hauled to the centre of gravity of the system.

Q. That you estimate to be a thousand miles?

A. Yes, sir, almost exactly a thousand miles.

Q. Frogs and switches—explain the detail of that item.

A. That is the cost of that material, plus handling in transit and store charges to the amount of $5, plus transportation (an average of a thousand miles) of $18.20—a total of $111.71, for the material in a 67-pound turnout, which is our average turnout. In order to get at the average turnout, we took all the turnouts we have from our records, added the weights together and divided by the number of turnouts and got the average weight of a turnout. To that we add the cost of transportation to the centre of gravity of the system.

Q. Taking both the frogs and switches and the rails, how did you arrive at the quantities to which you applied those prices?

A. From our records.

Q. From the records?

A. Yes, sir.

Q. Going right back to the item of grading, in order that there may be no misunderstanding about it. The quantities shown there, you state, have been ascertained from the profiles in the engineering department?

A. Yes, sir, from the profiles and from our records; mostly from our profiles, however.

Q. You do not wish it to be understood that you have in the engineering department any definite, absolute record showing the exact number of yards moved on the Northern Pacific system?

A. No, sir; only we have records showing yards moved under separate contracts, but they may or may not include a part of a line or the whole of a line. But we have very few complete records of the material in the line today—in any portion of the line today.

Q. Take the next item, No. 9, Track Fastenings.

A. Those are all taken from our records—everything on that sheet.

Q. That is, the quantities, the amount of material?

A. The quantities and the weights.

Q. And the prices?

A. No, sir. The prices are what we have to pay.

Q. What you have to pay at the present time?

A. Yes, sir, plus—

Q. Plus transportation charges?

A. Plus transportation charges and handling in transit.

Q. And in determining the transportation charges you have proceeded in the same way, that is, estimated the cost of hauling it to the center of the system?

A. Yes, sir.

Q. The next item is ballast. How did you arrive at the quantities of ballast?

A. Ballast is the hardest item we have to estimate correctly, of any of the items we have. It is almost impossible to tell how much ballast there is on a certain mile of railroad. You can go to a certain mile of railroad and you can dig, but you never can find the bottom of the ballast, and you may dig through the ballast. But we generally put on new lines about 3,000 cubic yards of ballast per mile, on the main line, and that is about what clean ballast there is on the main line; but of course in addition to that there is a lot of ballast inside of the roadbed that we cannot account for and we do not consider it.

Q. But it does actually tend to improve the roadbed?

A. Yes, sir. We have assumed as ballast what we actually put on, about 3,000 cubic yards per mile of main line. The yards are almost equally as well ballasted as the main line, and the side-tracks of the main line are usually as well ballasted as the main line. But we have taken those side-tracks and yards and branch lines and added them together, and have assumed there is about 1,500 yards to the mile.

Q. That makes a total, then, of 16,862,235 cubic yards of ballast on both main line, branches and sidings?

A. Yes, sir.

Q. How did you arrive at the price per cubic yard for ballast?

A. That price per cubic yard is merely my judgment of what that material would cost in place.

Q. Upon what do you base that judgment?

A. I base it on my experience in getting out ballast and estimating it and paying for it and seeing what it has cost complete. But we have some exhibits here showing what ballast has actually cost us.

Q. That is what I wanted to come up to.

A paper was marked Complainants' Exhibit 9 (Darling).

COMPLAINANT'S EXHIBIT 9 (DARLING).

TEMENT OF ACTUAL COST OF TRACKLAYING AND BALLASTING DONE BY NORTHERN PACIFIC RAILWAY COMPANY DURING YEARS 1906, 1907 AND 1908.

BALLASTING: COST PER CUBIC YARD:

	No. Miles.	Cubic yards.	Maintenance.	Rent of Equipment.	Train service and Transportation.	Paid Contractors.	Total.
newick - Van-							
uver	255.80	897,731	3.6c.	18.4c.	30.00c.	34.70c.	86.70c.
te Pine Hill	32.89	124,683	3.6	9.87	20.12	30.87	64.46
Regis-Paradise	24.99	78,986	3.6	12.58	20.25	37.93	74.36
h Dakota	31.02	108,675	3.6	11.25	36.75	36.00	87.60
nesota	62.62	198,257	3.6	13.25	25.50	41.25	83.60
. & I. F	37.00	140,000	3.6	8.98	15.29	33.84	61.71
	444.32	1,548,332	3.6c	15.43c	27.27c	35.39c	81.69c

TRACKLAYING: COST PER MILE:

	Number Miles.	Rent of Equipment.	Train service and Transportation.	Paid Contractors.	Total
newick - Vancouver	255.80	$283.10	$402.79	$583.66	$1,269.55
te Pine Hill	32.89	49.19	360.05	714.09	1,123.33
tegis - Paradise	24.99	107.05	431.98	658.97	1,198.00
h Dakota	31.02	120.50	245.43	392.15	758.08
nesota	62.62	120.50	245.43	392.15	758.08
. & I. F	37.00	60.77	399.63	400.06	860.46
	444.32	$203.09	$367.84	$541.95	$1,112.88

Q. Just state to the Master what Complainants' Exhibit 9 shows in reference to the cost of ballasting, what the exhibit is, what it shows?

A. It shows the details of the actual cost to the railway company of putting under the track, complete, a yard of ballast, and also the cost per mile of laying track.

Q. That is, what it has actually cost the Northern Pacific Railway Company during the years 1906, 1907, and 1908?

A. Yes, sir.

Q. It represents actual prices paid?

A. Yes, sir.

Q. And how much has that been per yard?

A. That has averaged on 444.32 miles, including a total of 1,548,332 cubic yards of ballast, 81.69 cents per cubic yard.

Q. That covers different states on the system—Montana, North Dakota, Minnesota, and Washington?

A. Yes, sir.

Q. The price fixed in your estimate is 66 cents?

A. Yes sir.

Q. Take the next item, track laying. You have multiplied the grand total of miles by 920; that is, figured that it cost $920 per mile to lay track?

A. Yes, sir.

Q. How was that figure arrived at?

A. Track laying and surfacing should be divided under two heads; first, track laid that is to be ballasted; second, track laid that is not to be ballasted but is to carry traffic for surfacing, that is, material thrown in from the sides or sand brought in from some nearby place. Track laying of that nature, including surfacing, costs about $250 a mile more than track laying that is to be ballasted later on. And I have assumed as an average price for track laying the general average between the two, which is about $920 per mile. I have taken track laying itself at $740 and track laying that is to be surfaced at $1,100, making a total of $1,840, which averages $920 per mile.

Q. And how does that average contrast with the prices actually paid during the years 1906, 1907 and 1908, as shown by Complainants' Exhibit 9?

A. Those same 444.32 miles for which we had an estimate for ballast cost, on an average, complete, $1,112.88 per mile.

Q. The next item, fencing right-of-way. How was the total of $905,090 arrived at?

A. That is taken from our records. I have no details of that, because that matter has never come up in detail, but it

is taken from our records, and multiplying so much per mile by the different kinds of fencing.

Q. That is, you have taken the number of miles of fencing as shown by the records—

A. Yes, sir.

Q. —and multiplied it by what your experience shows would be the present cost of constructing it?

A. Yes.

Q. The same is true of crossings and signs?

A. Yes, sir.

Q. Interlocking plants?

A. Yes, sir.

Q. Signal apparatus?

A. Yes, sir.

Q. Telegraph lines and telephone lines and appurtenances?

A. Telegraph lines and telephone lines and appurtenances, the estimates were furnished by the superintendent of telegraph, for which we have complete details.

Q. Station buildings and fixtures?

A. Yes, sir; those are from our records.

Q. Those were taken from the records?

A. Yes, sir.

Q. The prices per square foot as shown in the sheet numbered 18. Are they about what you would have to pay at the present time?

A. Yes, sir.

Q. You add 12 per cent. to the total to cover the cost of transportation?

A. Yes, sir.

Q. At tariff rates?

A. At tariff rates.

Q. General office buildings and fixtures, estimated cost of reproduction; how was that arrived at?

A. That includes the headquarters building at Tacoma and at St. Paul. That was taken from our actual records of the structure itself; we have got details of both of them, and we apply the prices that it would cost to construct at the present time.

Q. Shops, engine houses and turn-tables?

A. That is the same way; from our records complete.

Q. Shop machinery and tools?

A. That is furnished by the superintendent of motive power.

Q. Water stations?

A. That is from our records entirely, complete.

Q. Fuel stations?
A. The same.
Q. Dock and wharf property?
A. The same.
Q. This dock and wharf property is, of course, independent of the real property?
A. Yes, sir.
Q. It does not include any real estate?
A. No; that is the buildings on the property.
Q. Miscellaneous structures?
A. That covers stockyards, track scales, snow fences, section houses, ice houses, telegraph offices, tool houses, dwelling houses, and other miscellaneous buildings and fixtures. Those are from our records, and cost $2,882,586.70.
Q. The next item: joint work at Seattle. Explain what that includes?
A. That includes the terminal station—that is, a half interest in the terminal station at Seattle, half interest in the tunnel, and half interest in the tracks on the terminal grounds.
Q. How did you determine that one-half interest in that would cost $1,332,000 to reproduce?
A. From the records; that is, we got the quantities from the record and applied our prices.
Q. What prices?
A. The prices which it would cost to reproduce them at this time.
Q. The next item is steam locomotives.
A. Items 27, 28, 29, 30, and 31, including steam locomotives, passenger train cars, freight train cars, miscellaneous equipment and floating equipment, were furnished by the superintendent of motive power.
Q. The next item is mechanical engineering.
A. That is estimated as one per cent. on items 27 to 31, inclusive.
Q. That is, equipment items?
A. Yes, sir; and to provide for the getting up of general designs, the making of specifications, the inspection and trial of the machines complete. That is work that has to be done by the railway company, and it is not done by the manufacturer.
Q. The first item of engineering, then, did not cover any of those equipment items?
A. No, sir.
Q. The next item is the interest, and in order to explain that—
A. The next item is contingencies, is it not?

Q. The next item, I guess, ought to be contingencies, but it is omitted from my copy.

A. On the first page it specifies just what it covers.

Q. Oh, yes; the next item is contingencies. You have no special sheet for that.

A. No, sir.

Q. Just explain what "contingencies" is supposed to cover.

A. Contingencies are to provide for legal expenses, superintendence, organization, and most of it unenumerated items, floods, personal injuries and other unforeseen conditions that might arise during the progress of the work, and includes ten per cent. of items 1 to 32, inclusive.

The Master: What page is that on?

Mr. Donnelly: It is item 33 of the first page; there is no separate detail of it.

Q. That would cover anything like strikes—

A. Yes, sir; personal injuries.

Q. —or any embarrassment to which you may be subjected in carrying on the work?

A. Yes, sir.

Q. And you have included in that ten per cent. of all of the previous items?

A. Yes, sir.

Q. Now, what is your judgment as to the fairness of that percentage of the previous items to cover the item of contingencies?

A. It is absolutely necessary to cover those contingencies in an estimate made up in the way that mine has been made up.

Q. Is that a fair percentage?

A. Yes, sir.

Q. In the actual practice of constructing a line is allowance made for things of this character—

A. Yes, sir.

Q. —contingencies?

A. Yes, sir.

Q. And experience shows the necessity of making an allowance for such?

A. Yes, sir, experience shows the necessity of making allowances, and it also shows we never allow enough.

Q. Well, is that amount usually allowed?

A. Ten per cent., yes, sir.

Q. Ten per cent. of all of the items that precede that on the list?

A. Yes, sir.

Q. In preparing this estimate, Mr. Darling, how long have you assumed that it would take to reconstruct the Northern Pacific Railroad?

A. Twelve years.

Q. And how do you apportion the construction during that period of twelve years? That is, what work have you assumed would be done from year to year?

A. I have shown on the last two sheets the general method of construction and the manner of arriving at the charges.

Q. That is, you have assumed that during the first three years you would complete the purchase of the principal terminals, make progress in location of main lines and get contracts ready for construction?

A. Yes.

Mr. Teal: It would take three years to do that?

The Witness: Yes.

Q. During the following two years, to the end of the fifth year, just go ahead and state what you have assumed to be done in that item.

A. The main object in this method of construction is, first, to purchase the terminals at the principal points and get surveys and contracts in shape for construction; then to turn over every portion of the main line which we possibly can so as to accommodate traffic, and turn these lines over in a temporary condition because we cannot stop to complete one part of the main line; if we did, it would take too long, and the rest of the territory would not be served. Our idea is to start, for instance, from St. Paul and turn over in the first two years all that portion of the line from St. Paul to Fargo, St. Paul to Duluth, and Duluth to Staples, for instance, or about 577 miles. We will get that in shape so we can turn traffic on to it, but our bridges will not be complete. We will have timber bridges in, we will have a few side tracks, enough to operate that portion temporarily while we are going ahead and building the road. Our terminals will not be finished, but we will have some temporary buildings up for depots, and temporary buildings perhaps for freight houses during the construction of the balance. Then we go ahead and keep pushing our main line. At the end of the sixth year we will perhaps get the main line through from Fargo to Livingston, get the track down and get it ballasted in fairly decent shape so we can get some traffic over it. That will be a distance of 795 miles. At the end of the seventh year we would have completed all that portion from Livingston to Helena and Butte, a distance of 256 miles.

Q. Mountain construction?

A. Yes, sir, mountain construction, mountain operation. At the end of the eighth year we would have the main line in temporary condition from Butte and Helena to Spokane, a distance of 526 miles. Of course during all this time we are working beyond, doing everything we can at the west end and doing everything we can at the east in getting our side tracks and our yards and buildings all located in proper shape. At the end of the tenth year they complete some of the branches, sidings and yards—1900 miles. At the end of the eleventh year they complete some of the branches, sidings and yards. At the end of the twelfth year they complete everything. Now, that gives nine years of actual construction. We have got 81 hundred and some odd miles; that means over 900 miles a year. Now, nobody ever built 900 miles a year, that I ever heard of.

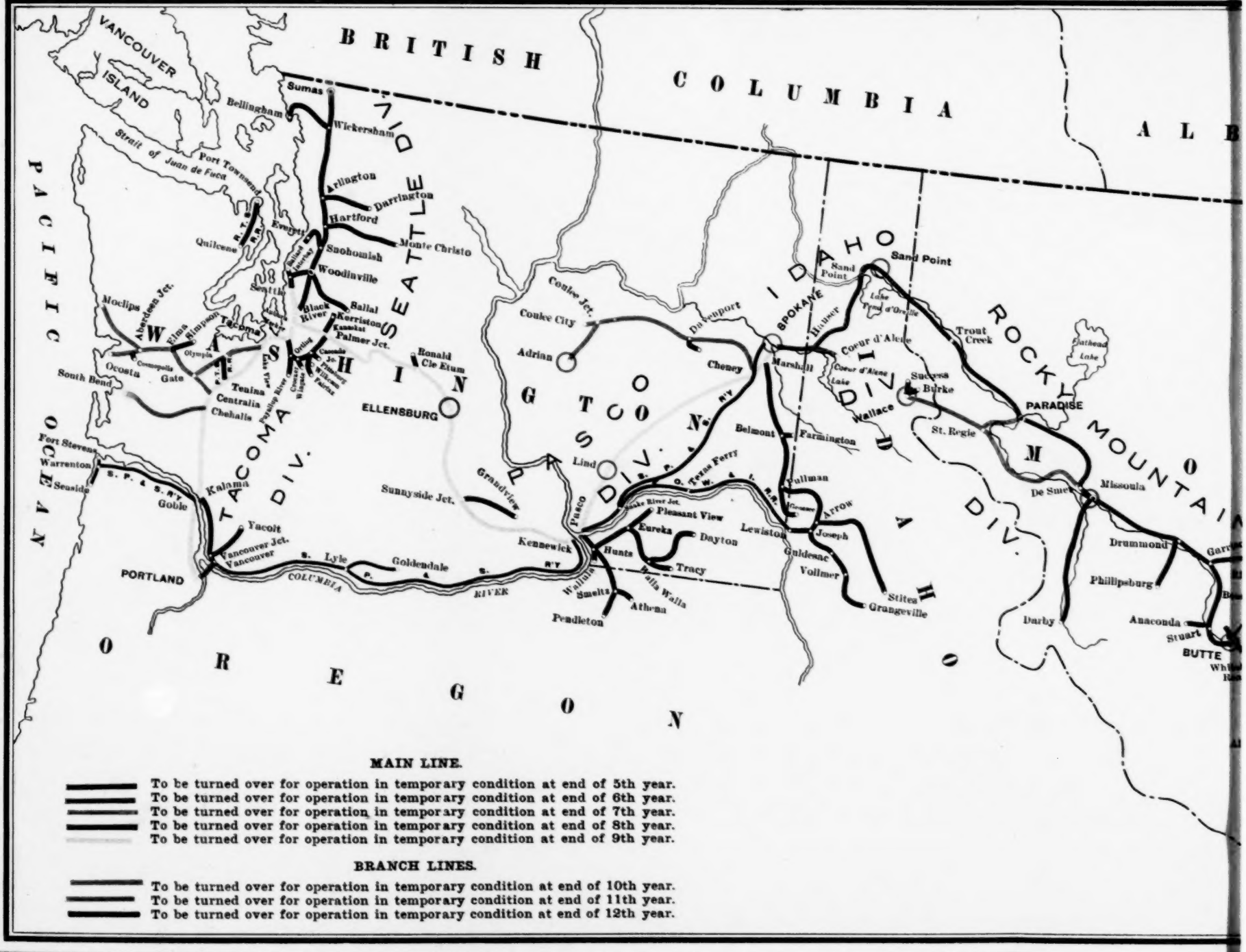
Q. How does the construction you have allowed for there compare with the construction by the Milwaukee of its Pacific coast extension?

A. The Milwaukee, at the end of 1910, about the time they will have the line completed for traffic, will have been under construction during the years 1906, 1907, 1908, 1909, and 1910—five years, and they will have laid and completed about 1500 miles of track—1350 miles of main line and the balance side tracks and yards. That is an average of something less than 300 miles per year.

Q. Have you prepared a map or blue-print showing the scheme of construction as outlined by you in this testimony, Mr. Darling?

A. Yes, sir.

A map was marked Complainants' Exhibit 10 (Darling).

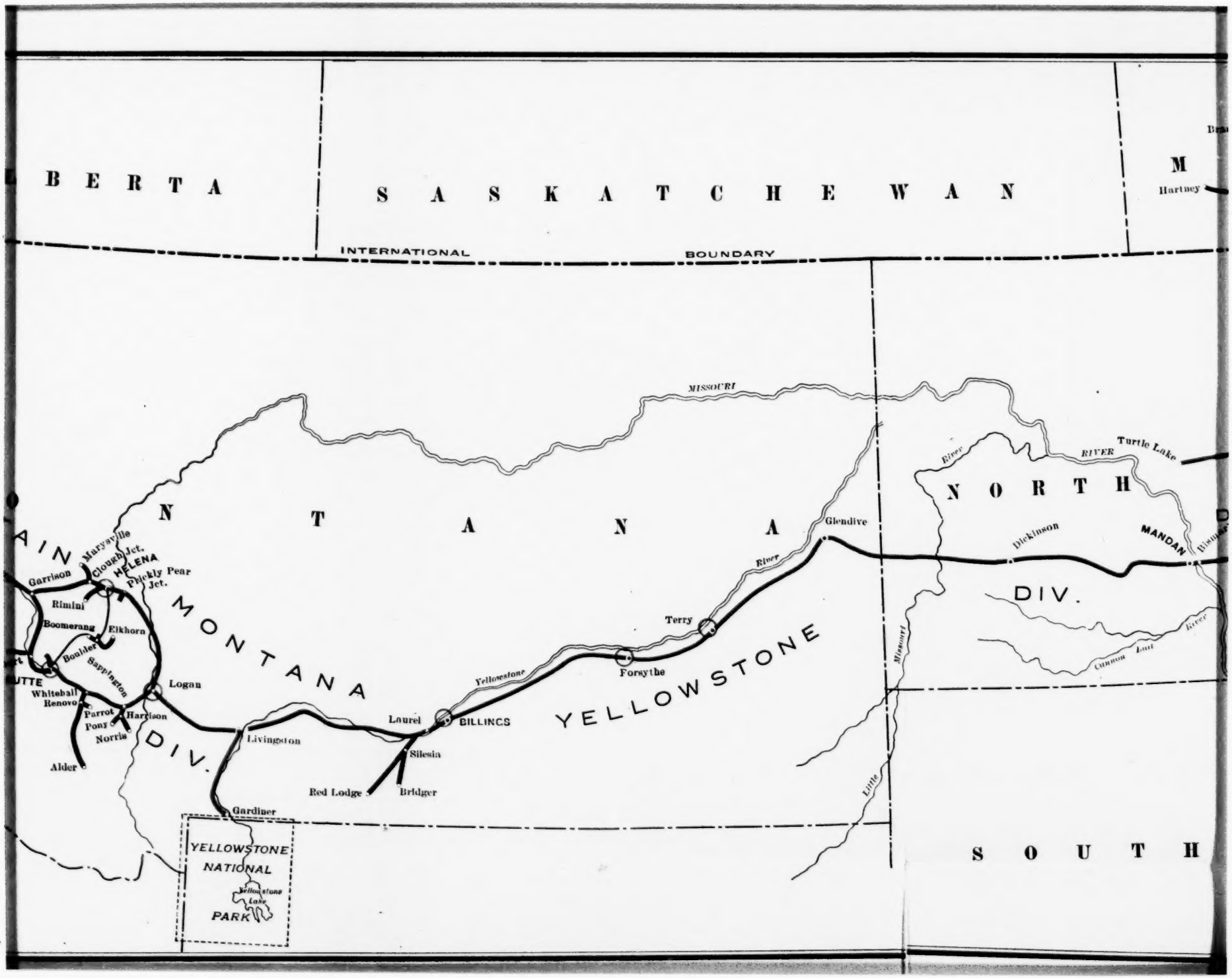


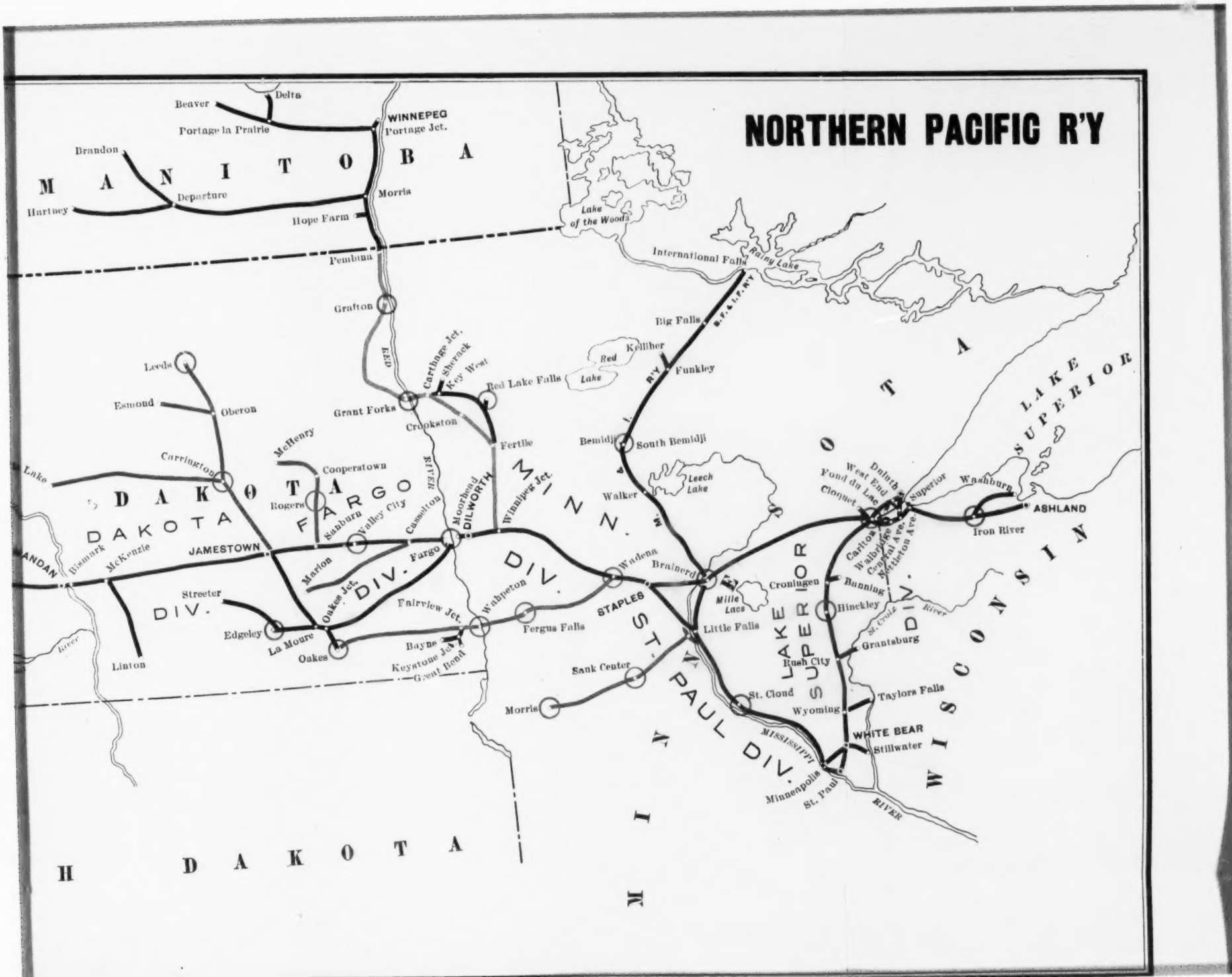
MAIN LINE.

To be turned over for operation in temporary condition at end of 5th year.
To be turned over for operation in temporary condition at end of 6th year.
To be turned over for operation in temporary condition at end of 7th year.
To be turned over for operation in temporary condition at end of 8th year.
To be turned over for operation in temporary condition at end of 9th year.

BRANCH LINES.

To be turned over for operation in temporary condition at end of 10th year.
To be turned over for operation in temporary condition at end of 11th year.
To be turned over for operation in temporary condition at end of 12th year.


BERTA
SASKATCHEWAN
M
Hartney
INTERNATIONAL BOUNDARY
MISSOURI
River
RIVER
Turtle Lake
NORTH
DAKOTA
DIV.
Glendive
Dickinson
MANDAN
Bismarck
Terry
Forsythe
Missouri
Cannon Ball
River
Yellowstone
River
Little
MONTANA
YELLOWSTONE
DIV.
Marysville
Clough Jct.
HELENA
Prickly Pear Jct.
Garrison
Rimini
Boomerang
Elkhorn
Boulder
Sappington
Logan
BUTTE
Whitehall
Renova
Parrot
Pony
Norris
Harrison
Alder
Livingston
Laurel
BILLINGS
Silesia
Red Lodge
Bridger
Gardiner
YELLOWSTONE NATIONAL PARK
Yellowstone Lake


NORTHERN PACIFIC R'Y
MANITOBA
Beaver
Delta
Portage la Prairie
WINNEPEG
Portage Jct.
Brandon
Hartney
Departure
Morris
Hope Farm
Pembina
Lake of the Woods
International Falls
Rainy Lake
B.R. & L.F. RY
Grafton
RED RIVER
Big Falls
Kelliher
Red Lake
Lake
RY
Funkley
Leeds
Esmond
Oberon
Carrington
Lake
Carthage Jct.
Sherrack
Key West
Grant Forks
Crookston
Red Lake Falls
Fertile
Bemidji
South Bemidji
Walker
Leech Lake
McHenry
Cooperatown
Rogers
FARGO
Sanburn
Valley City
Casselton
Moorhead
DILWORTH
Winnipeg Jct.
MINN.
NORTH DAKOTA
DAKOTA
JAMESTOWN
Bismark
McKenzie
Marion
Oakes Jct.
DIV.
Fargo
Streeter
Edgeley
La Moure
Oakes
Linton
Fairview Jct.
Wahpeton
Bayne
Keystone Jct.
Grant Bend
Fergus Falls
Wadena
STAPLES
Brainerd
Mille Lacs
Little Falls
Sauk Center
Morris
ST. PAUL DIV.
St. Cloud
Minneapolis
St. Paul
MISSISSIPPI RIVER
Duluth
West End
Fond du Lac
Cloquet
Superior
Washburn
ASHLAND
Iron River
LAKE SUPERIOR DIV.
Carlton
Wallbridge
Central Ave.
Scottston Ave.
Cromlugen
Hinckley
Running
St. Croix River
Grantsburg
Rush City
Wyoming
Taylors Falls
WHITE BEAR
Stillwater
WISCONSIN

Q. Will you explain to the Master the scheme of re-construction as it is shown on that map or blue-print.

A. These lines and the various colors represent the Northern Pacific system complete, and I have shown in various colors the portions which it is proposed to turn over for operation in temporary condition at the end of the various years. At the bottom of the map is a legend; for instance, the lines in red show the portion of the system to be turned over for temporary operation at the end of the fifth year; the lines in black those to be turned over at the end of the sixth year, and so on all through.

Q. The legend at the bottom of the blue-print explains the coloring of the lines throughout, does it?

A. Yes, sir. This map is also intended to show the proposed method of construction.

Q. Just explain a little more fully what that is.

A. In order to construct the Northern Pacific system as it exists, and do it within the time we are figuring, you have got to do it by the aid of other railroads. Therefore, I have shown by yellow circles intersecting lines that we must use for getting out men, tools and material for construction. For instance, on the portion between St. Paul and Fargo we would haul out to St. Cloud or points near there over the Great Northern line; at Wadena we would haul over the Great Northern; at Brainerd we would haul in stuff over the M. & L.; at Oakes we would haul in over the Northwestern; at Carrington over the Great Northern; at Grafton over the Great Northern; at Terry we would haul stuff via the Milwaukee; at Billings we would haul material over the Burlington; at Logan over the Milwaukee; at Butte we would haul in material and men by way of the Union Pacific or the Milwaukee; at Helena we would have to use the Great Northern; at Missoula we would use the Milwaukee; at Wallace the Union Pacific; at Sand Point the "Soo" or the Spokane International or the Great Northern; at Spokane the same; at Lind, Washington, we would haul in material over the Milwaukee; at Adrian over the Great Northern; at Ellensburg over the Milwaukee; and on the Coast by various roads.

Mr. Teal: Do I understand you to say that in your estimate you figure that all of your material for this road is to be hauled over other roads?

The Witness: No, sir, not all of it.

Mr. Teal: A very considerable portion of it?

The Witness: Yes, sir, a very considerable portion of it.

Q. But whether hauled on other roads or on your own, the tariff rates have been allowed for the transportation of material?

A. Yes, sir.

Q. In fixing the period of twelve years, do you consider that to be as short a period as would be required for the economical construction of the road?

A. Yes, sir. And then I doubt very much whether we could do it at the price we have estimated.

Q. Within that time?

A. Yes, sir.

Q. The shortening of the period, you think, would tend to increase the cost of construction?

A. Certainly; very much.

Q. Now, turning to page 34, on which the interest is summarized, will you explain the way in which the interest item has been made up?

A. The interest item is based first, of course, on the rate assumed for interest, which is 6 per cent; second, it is based on the time in which that money must be in use. To get at the time that that money is in use you have got to outline the method of construction and how this money must be called for to pay the bills as they are due. That is shown in considerable detail on page 34. That is, in order to get these lines ready so we can build 900 miles a year, get our location completed and get the principal terminals purchased, which you must do before you begin work, you have got to expend for the various terminals, at Superior—shall I read these various sums?

Q. Well, at those points that are named on page 34?

A. Yes, sir; $78,163,401.03.

Q. You take those items from Mr. Cooper's estimate?

A. Yes, sir. Now, those purchases are to be made or are to be paid for in equal installments during the first three years. This gives us an average interest of a year and a half. That interest has got to be carried forward until the completion of that road, which is nine additional years, or a total of 10-1/2 years of interest on that particular item. Then, after the first three years—

Q. Well, that makes 63 per cent; 10-1/2 years, 63 per cent on the item of $78,163,401.03?

A. Yes.

Q. Or a total of 49 millions?

A. Yes, sir.

Q. Now, in arriving at that item you have assumed that throughout the entire period of twelve years which would be

consumed in the re-construction of the road, that the property would yield no income in excess of the cost of its operation?

A. Yes, sir.

Q. And that assumption has been carried through in the preparation of this statement?

A. Yes, sir.

Q. Now just go ahead.

A. After the end of the third year the balance of the terminals are to be purchased in equal installments during the years 4 to 10, inclusive, because at the end of the tenth year all the right-of-way must have been purchased in order to complete the construction. That makes an average of six per cent for 5-1/2 years, at 33 per cent for one year. Then the right-of-way and station grounds are to be purchased during the years 3 to 10, inclusive; that is, they have got to begin the purchase of the right-of-way the third year in order to begin construction immediately afterward. Those rights-of-way and station grounds are to be paid for in equal installments during the years 3 to 10, inclusive, making interest at 6 per cent for six years or a total of 36 per cent, on $29,691,682, the interest amounting to $10,689,005.04. The construction work included in items 3 to 26, inclusive, are to be spread over the years 3 to 12, and carries interest an average of five years at 6 per cent, or 30 per cent for one year. In order to handle the traffic, or as much of it as can be during construction, they have got to begin the purchase of equipment during the fifth year, I think it is,—fifth to twelfth, and that is to be purchased in equal installments during those years, giving an average interest of four years, or 24 per cent for one year. The engineering item covers equal installments during the twelve years, or 36 per cent of the engineering item. The mechanical engineering during the years 3 to 12, an average of five years. Contingencies during the twelve years, or an average of six years, at 36 per cent. Making a grand total of $164,388,-682.09.

Q. And making a grand total, then, for the 34 items, of $622,425,904.63?

A. Yes, sir.

Q. And does that in your judgment represent what it would fairly cost to reproduce the operating system of the Northern Pacific Railway Company?

A. Yes, sir, on the basis that I have used.

Q. On that basis; assuming that rate of interest on the computation to determine it?

A. Yes, sir.

Q. Now, taking the items that follow No. 34 on the first sheet. The first item is "Lines in Manitoba, $7,000,000." That $7,000,000 represents what? How was that figure arrived at?

A. That is the sum agreed on with the Manitoba government which is to be paid, for which the lines are leased, at four per cent—in other words, the income of the lines in Manitoba is $280,000 a year. That is represented by the capital of $7,000,000.

Q. They have an option on the purchase at that price?

A. Yes, sir.

Q. The next item: "Duluth Union Depot, exclusive of right-of-way."

A. That is made up from our records.

Q. And that item has not been included in any of the previous items?

A. No, sir.

Q. "The St. Paul union depot, 1/9 interest."

A. That was made up from complete records.

Q. That is, you have taken 1/9 of its total value as shown?

A. The total cost of reproduction.

Q. "Minnesota Transfer Railway, 1/10 interest." How was that item arrived at?

A. That item was taken from Mr. Stickney's estimate of the cost of reproduction of that property.

Q. Who is Mr. Stickney?

A. Mr. Samuel Stickney. He was president of the Minnesota Transfer?

Q. And how and where was that estimate made? For what purpose?

A. It was made for the purpose of submitting it to the state in the Minnesota rate case—or rather to the State at the request of the Minnesota Railway & Warehouse Commission.

Q. "The interest in the Northern Pacific Terminal Company of Oregon."

A. That was an estimate made by our engineer at Portland.

Q. The Northern Pacific owns 40 per cent of that property?

A. Yes, sir.

Q. The item "1/3 interest in the Lake Superior Terminal & Transfer Railway Company." State what that property is.

A. That is property in West Superior. Terminal Company.

Q. And how was that figure arrived at?

A. That is the cost of reproduction—based on what it cost.

Q. Based on what the property actually cost?

A. Yes, sir. I don't think there has ever been a real estimate made of the Lake Superior Terminal.

Q. The Northern Pacific owns a one-third interest in that property.

A. Yes, sir.

Q. "The Big Fork & International Falls Railway, $706,000." Is that property owned by the Northern Pacific?

A. 70 per cent of it.

Q. 70 per cent of it?

A. Did I understand you to say "Minnesota & International?"

Q. No. Big Fork & International Falls Railway.

A. That was made up from our records. That is entirely owned by the Northern Pacific.

Q. That is entirely owned by the Northern Pacific?

A. Yes, sir.

Q. The Minnesota & International Railway, the Northern Pacific owns 70 per cent of it?

A. Yes, sir.

Q. And that item $3,760,000, how was that arrived at?

A. That is an estimate made at the request of the Minnesota Railroad and Warehouse Commission.

Q. Of the cost of reproduction of the entire property?

A. Yes, sir.

Q. And you have taken 70 per cent of that cost?

A. Yes, sir.

Q. The next item there—"Supplies on hand."

A. That was furnished by our storekeeper, and that is the amount of supplies that he is carrying at this time.

Q. The next item, "Lines under construction," just explains that.

A. That covers the work which is now being done between Missoula and Garrison, from Auburn to Meeker, the extension of the Green River and Northern. And that is all.

Q. How was the total arrived at there? Does that represent—

A. That represents the estimates to date.

Q. Of money actually expended?

A. Money actually paid, yes, sir.

Q. The next item—"Northern Pacific 1/3 interest in S. P. & S. Railway."

A. Yes, sir.

Q. That is the railway under construction from Vancouver to Portland—a million and a half.

A. That represents the ownership of the Northern Pacific in that portion of the line between Vancouver and Portland.

Q. That is to say, that portion of the line in addition to the one-half general ownership that the Northern Pacific has in that property, it owns an additional third, or five-sixths, of that line?

A. Yes, sir.

Q. The last item: "Northern Pacific half interest in the S. P. & S. railway under construction, 27 millions odd."

A. That represents half of the total money paid out to date.

Q. In the construction of the S. P. & S. railway?

A. Yes, sir, and its lines.

Q. Mr. Holden suggests it would be well to indicate, for the benefit of the master, where that S. P. & S. railway is, so that he will understand.

Mr. Teal: We call it the North Bank out there.

A. (Indicating on map) That is shown in white.

Q. It is shown in white on the blue-print, is it?

A. It shows in white on the blue-print, extending from Spokane southwesterly along the line shown in white and marked "S. P. & S." on the map, to Pasco and Kennewick at the crossing of the Columbia and junction with the Snake; thence along the north bank of the Columbia to Vancouver; thence across the river to Portland, a branch extending from Gobel, near Kalamo, the crossing of the Northern Pacific over the Columbia river; thence along the south bank of the Columbia river to Astoria and Seaside; thence a line extending from Lyle to Goldendale, in Washington.

Mr. Teal: Mr. Darling, may I ask you a question there? I notice you said that the Seattle, Spokane & Portland went from Gobel to Astoria and Seaside.

The Witness: Yes, sir.

Mr. Teal: That is the Astoria & Columbia?

The Witness: Yes; owned by the Portland & Seattle.

Mr. Teal: And the purchase price of that is included in this?

The Witness: Yes, sir.

Mr. Teal: That is what I wanted to know.

The Witness: Yes, sir.

Mr. Teal: And the same way with this road out to Goldendale there?

The Witness: Yes, sir.

Mr. Teal: The purchase price of that is included in this amount?

The Witness: Yes, sir.

Q. That line is spoken of in your estimate here as being under construction?

A. Yes, sir.

Q. Isn't that, or a portion of it, in actual operation now?

A. Yes, sir; it is in operation from practically a point about seven miles west of Spokane through to Portland and Seaside.

Q. The line, then, is practically completed?

A. Except some approaches into Spokane. There is an approach to the Northern Pacific not completed, and an approach to the Great Northern.

Col. Clough: Give them the length of the Spokane, Portland & Seattle.

The Witness: The length of the Spokane, Portland & Seattle is—I haven't got the figures here, but from Portland to Pasco is 230 miles; from Pasco to Spokane it is 146 miles.

Mr. Teal: That is the new construction?

The Witness: Yes, sir. Then there is a branch which I did not refer to before, extending from Spokane Junction, on the Snake River, east to a connection with the Union Pacific at Texas Ferry, a distance of 41 miles.

Mr. Teal: That is up the north bank of the Snake?

The Witness: Yes, sir. It is a branch extending from Lyle to Goldendale. I have forgotten the distance. I haven't got it here. The road from Gobel to Astoria and Seaside, a branch over to Warren, I don't remember the length of that; I think it is 118 miles, though.

Mr. Teal: A little more.

Q. Now, these various properties, Mr. Darling—the Duluth union depot, the St. Paul union depot, the Minnesota Transfer Railway, Lake Superior Terminal & Transfer Company, the Northern Pacific Terminal Company of Oregon, the Big Fork & International Falls Railway, and the Minnesota & International Railway—are all adjuncts, in a sense, of the Northern Pacific system and used in connection with its operation?

A. Yes, sir.

Q. And the same is true of the Spokane, Portland & Seattle—it will be operated in connection with the Northern Pacific?

A. Yes, sir.

Q. The other half interest in that line being owned by the Great Northern?

A. Yes, sir.

Q. Those additional items, then, following the item No. 34 on the first sheet of your exhibit 4, bring the grand total up to $682,193,601.68?

A. Yes, sir.

Q. Now, you submitted an estimate in connection with your testimony in the Minnesota rate case, did you, Mr. Darling?

A. Yes, sir.

Q. And what was the grand total of the cost of reconstruction as shown by that estimate introduced in that case?

A. I don't remember, but I think it was $457,000,000.

Q. Wasn't it $497,000,000?

A. $497,000,000, yes.

Q. What items are included in this present estimate that were not embraced in the estimate at that time?

A. I don't know as I could tell you all of them. I would have to compare them. But I know some that weren't. The Northern Pacific one-half interest in the Spokane, Portland & Seattle was not included, amounting to $27,608,733.51; the Northern Pacific one-third interest in the Spokane, Portland & Seattle between Vancouver and Portland, $1,500,000, lines under construction amounting to $9,619,283; and in addition to that—

Q. The supplies on hand?

A. Part of that was included—what we had at that time. In addition to that there is a lot of work that we have done since. We have done a great deal of work in the last four or five years. And these estimates vary every year.

Q. How did the interest item in the present estimate compare with the interest item as it appeared in your estimate in the Minnesota rate case?

A. The interest item on the lines as estimated for the Minnesota rate case was made on an entirely different basis.

Q. And what was that basis?

A. I used in that calculation four per cent interest, and I also figured on turning all these lines over to the operating department in uncompleted condition, at which time the operating department were to take it, relieve the construction department of all interest, and the deficit to be taken care of by profit and loss and paid for in later earnings, if there were any.

Q. And the total of the interest, then, as it was shown in the exhibit in that case, amounted to how much?

A. I think it was $37,000,000 or $38,000,000.

Q. As against $164,000,000?

A. Yes, sir. And it also provides for two years more to

construct it in, for the reason that we have done practically two years of work since.

Q. This present estimate gives the estimated cost of reproduction as of the present date?

A. Yes, sir.

Q. How much would the total—that is, the first total of $622,000,000—be reduced if you were to take the cost of reproduction of the system as it stood say November 1, 1907?

A. November 1, 1907?

Q. Yes.

A. $21,385,950.10 plus six per cent interest for nine months, or 4-1/2 per cent; the total interest being $962,367.75, or a total less than the present estimate of $22,348,317.85.

Q. And how much would it be reduced if you were to take the cost of reconstruction as of June 30, 1908?

A. The work done during that time amounts to $10,052,-885.18.

Q. That is the work done since June 30, 1908?

A. Between July 1, 1908, and April 12, 1909. And in addition to that, there is interest at six per cent for an average of five months, or 2-1/2 per cent, amounting to $251,332.13—a total of $10,304,217.31.

Mr. Donnelly: Now, all of those exhibits are to be considered in evidence, subject to the objection?

Mr. Teal: Yes.

Q. In the preparation of this statement, Mr. Darling, of course the labors of a number of clerks have been utilized in the preparation of this detailed statement?

A. Yes, sir.

Q. And is everybody who has in any way been employed in connection with the preparation of the statement available here?

A. Yes, sir.

Q. For the purposes of examination?

A. Yes, sir.

Q. All of the records of the Northern Pacific Railway Company that have been utilized in its preparation?

A. Yes, sir. There may be one or two men that I couldn't get hold of.

Q. That you couldn't get hold of right away?

A. That I couldn't get hold of right away. I could find them.

Q. And get them?

A. Yes, sir.

Q. And are you willing that any of them should be called and examined, for the purpose of determining the accuracy of these statements?

A. Yes, sir.

Q. And all of the records are open to examination?

A. Yes, sir.

Q. For the purpose of determining it?

A. Yes, sir.

Mr. Teal: We will ask Mr. Darling a few questions this evening to take up some of the time and save some time, but we will have to look this exhibit over, of course.

Cross-Examination.

By Mr. Teal:

Q. Mr. Darling, there are one or two matters that I would like to have clearly and definitely understood. You have used the expression several times that this data was in existence, or taken from the books of the company that you have used, and represents actual figures and represents actual results, as shown by the books of the Northern Pacific Railway Company?

A. Yes, sir. And in each instance I refer to quantities—not cost.

Q. Then as to quantities, the engineering, or other department, of the Northern Pacific Railway Company can furnish them exact, if any one desires to investigate it?

A. With such exceptions as I have testified to.

Q. Now, what exceptions are there?

A. Grading; all grading items, ballast, crossings and signs. I don't think we could furnish every one of those complete. But, with those exceptions, I think we could make an inventory, with time.

Q. Now, as to actual cost what do your books show?

A. They don't show much of anything. I have shown here on one exhibit all the yardage in grading which we can get from our books. I might be able to pick out a few more, but I have had a lot of men at work for ten days or two weeks on these books trying to pick out grading items for which we have a cost. I wanted to find out what each yard of dirt cost, what each yard of loose rock cost, and what each yard of solid rock cost the railroad company, and the only way to do that was to go to the books for which we have contracts

and contract prices and see what we paid the contractors and see what it actually cost us. Now, I picked out all of those items I could find and I have shown them on this exhibit.

Q. Since the reorganization of this company your books must show all items that have gone into construction and what has been paid for them, must they not?

A. I couldn't tell you as to that.

Q. You cannot say, then, whether or not a construction item is charged up?

A. I don't know how it is charged. You would have to ask the comptroller for that. I couldn't tell you, sir.

Q. In the preparation of this statement, this is what might be termed a hypothetical statement, is it not? That is, in this way: You have taken the problem, as you understand it, of reconstructing the Northern Pacific railroad as it stood on April 12, 1909, based upon 12 years time in its construction? That is correct, is it not?

A. Yes, sir.

Q. And you have also based your interest charge as of the same date at the rate of six per cent. per annum, covering the entire period of time?

A. Yes, sir; during which money was in use.

Q. Yes. And you have also shown construction in divisions of several hundred miles each running through separate periods?

A. Yes, sir.

Q. And you have allowed nothing whatever for any earnings in that time?

A. Nothing whatever.

Q. Or for operating expenses?

A. Nothing whatever, no, sir.

Q. And you think, as an expert, with your experience, under oath, that that is a fair way to submit a question of that kind to the court?

A. It is a fair way—

Q. I would like to have an answer "Yes" or "No," Mr. Darling; and then you can explain after you answer.

A. Let me get the gist of the question, please.

Mr. Teal: Read the question, please.

(Question read).

A. I don't know. My estimate is not made up on that basis.

Q. Your estimate wasn't made up on the basis to submit a fair proposition to the court?

A. Well, I don't know what you mean by "fair." My estimate was made up on the basis of the cost of reproducing that property.

Q. And you think that it is a fair proposition, and one that you are willing to submit to a court, with your experience on railroads constructed as this railroad is proposed to be constructed, that you should charge six per cent. interest upon its cost for the entire twelve years, notwithstanding thousands of miles of road have been built and are being operated in the meantime in this section of country where this road runs?

A. I didn't make up an estimate to submit to a court for any fairness whatever. My estimate is made up on a proposition to construct that road in the most economical way and in the quickest time. Now, whether that road could earn any money during the time of its operation, I don't know. My judgment is that it could not.

Q. Your judgment is that it could not?

A. No, sir; my judgment is it could not if it is constructed properly and served the public properly. Of course you can build that road so as to earn lots of money. There is no question about that. You can build it piecemeal. For example, you can build a line from here to Fargo and complete it and put it in shape for operation and handle the business, and perhaps make some money out of it—I don't know. But if you are going to build that line to serve the public properly, you have got to build the line to Fargo, you have got to turn it over in a temporary condition and get what business you can, you have got to take the business that is offered, in the best way that you can, and not wait until you get it done, because there are other people further west waiting to have their business served.

Q. So you think that if lines were built out from St. Paul towards Fargo, towards Missoula, towards Butte, in the different directions in the Dakotas and Montana, that for ten years, simply because that line was intended for a through line, eventually it would not earn any money?

A. That is my judgment. I am basing my judgment on what it appears to me the Milwaukee are doing today.

Q. You are familiar with the Great Northern Railway, are you not?

A. Yes, sir.

Q. And you are familiar with its operations under Mr. Hill?

A. Well, I am reasonably familiar.

Q. I mean its operating conditions.

A. I am in the same way that any man is.

Q. When was that road completed to the coast?

A. I should judge about 1891 or 1892; I forget about when.

Q. Do you think it paid dividends on its stock before it was completed to the coast?

A. I think the best way to find that out is to ask men who understand it. I don't know.

Q. You don't know.

A. I don't know.

Q. But at any rate your theory is that railroads built out through this country wouldn't pay unless they were completed to the Pacific coast?

A. No, sir; I don't claim any such thing as that. I claim that a line can be built from here to Fargo and get the business that the Northern Pacific has got and probably pay a lot of money on it; but you cannot do all this work that you have got to do to handle the other through business at the same time.

Q. It is your idea that the through business pays better than the local business?

A. I wasn't thinking of through business or any other kind of business. I was just simply building this line through in the most economical way and to serve the public in the best manner we could, regardless of whether we are earning anything or not.

Q. Now, then, on this six per cent. interest basis, you are of course familiar with the bonded indebtedness of the Northern Pacific?

A. Yes, sir.

Q. And do you know of any bonds that they have out at six per cent?

A. No, sir. But I am assuming that this railroad is obliterated. When they start to reconstruct this railroad is obliterated. They have nothing to issue bonds on. They have got to go to work and borrow money in the open market. They haven't got any traffic.

Q. If you are assuming it is going to be built at all, you are assuming money is going to be raised to build it?

A. It has got to be raised, but you cannot raise it on bonds, unless you have got something to mortgage.

Q. So you figure that if people were able to raise the money, because the road couldn't be built unless it was raised, you figure that on a basis of six per cent?

A. Yes, sir.

Q. With the Minnesota Commission you figured it on a basis of four per cent?

A. Yes, sir. I concede now that I was low in it; and I see that I was low simply by a better study of the conditions after that estimate was made.

Q. You made an estimate of this road in 1898, as to its value, didn't you?

A. Yes, sir.

Mr. Holden: 1898?

Q. 1898.

A. 1898. Oh, no.

Q. Didn't you go over this road?

A. No, sir.

Q. When was the first valuation you made of this road?

A. I never made a valuation of the road before 1907.

Q. Before 1907?

A. No, sir.

Q. Now, in 1907 you did make a valuation, did you not?

A. Yes, sir.

Q. And you testified in the Spokane rate case?

A. Yes, sir.

Q. In round numbers, how much have you increased your valuation of the cost of reproduction between that statement and this that you testified to at that time?

A. I don't know. I think it must be 200 and some odd million dollars.

Mr. Donnelly: Of course, there was considerable property, you understand?

Mr. Teal: Yes, I was going to ask how much was the additional property.

Q. How much additional mileage have you in this report to what you had in the Spokane report?

A. I couldn't tell you, sir. I would have to look at the Spokane report.

Q. You have a copy of that?

A. Yes, sir.

Q. Will you please bring it tomorrow morning?

A. Yes, sir.

Q. Now, in that Spokane report you also had included a valuation of $50,000,000 for coal lands, hadn't you?

A. No, sir; I didn't include that at all.

Q. No; but the item of cost was in there, wasn't it?

A. I understand it was, yes.

Q. But that wasn't included in this?

A. No, sir.

Q. Now, you made another valuation for the Minnesota Railroad Commission?

A. Yes, sir.

Q. And that valuation for the Minnesota Railroad Commission was higher than the Spokane?

A. Yes, sir.

Q. And this is higher than the Minnesota?

A. Yes, sir.

Q. And that is the order in which they came?

A. That is the order in which they came.

Q. First the Spokane?

A. Yes, sir.

Q. Then the Minnesota?

A. Yes, sir.

Q. And now this one?

A. Yes, sir.

Q. Could you state what the valuation that you put on the reproduction of the Minnesota properties was in the Minnesota rate case?

A. I think it was $101,000,000 or something.

Q. Can you state what valuation the state engineer put on the same property?

A. I cannot state; but I think it was about 30 per cent. less.

Q. About how much?

A. About 30 per cent. less.

Q. In the Spokane case there was also an engineer who testified as to the value of the Northern Pacific, was there not?

A. Yes, sir.

Q. You and he disagreed quite largely there?

A. Yes, sir; very much.

Q. The fact of the matter is that engineers do disagree very largely on these questions, don't they?

A. They are very apt to. I don't think very largely, though. If you take engineers that are acquainted with the same properties, I don't think they will vary very much.

Q. Now, I would like to ask you this: I notice here in this heading "2," that "Right-of-way, station grounds and terminals on operated lines" is fixed, in round numbers, at $114,000,000.

A. Yes, sir.

Q. Those are the figures that were furnished you by Mr. Cooper?

A. Yes, sir.

Q. The right-of-way and station grounds and terminals are purchased by the land department, are they not?

A. Yes, sir.

Q. And the engineering department, outside of simply locating what they desire, have nothing to do with that?

A. Except to say when and where they shall be purchased.

Q. That is what I meant by the language. Selecting them, is what I meant.

A. Yes, sir.

Q. And the charge for the acquisition of those properties all goes into the right-of-way department and the land department of the Northern Pacific?

A. Why, the charge for the actual purchases goes in, but the work in connection with the right-of-way, the locating of the right-of-way, and all work in connection with that right-of-way except the actual purchasing, is done by the engineering department.

Q. I understand; but this all appears in the $114,000,000?

A. Yes, sir.

Q. That is what I mean.

A. The work done by the engineering department?

Q. Yes.

A. No, sir.

Mr. Holden: Wait a minute. You said the actual purchases were made by the engineering department.

Mr. Teal: No, I didn't.

Mr. Holden: I beg your pardon. He didn't mean that, but I think the language was that.

The Witness: I said, "except the actual purchases" were made by the engineering department.

Q. Where is the item covering that account?

A. Item 1.

Q. Item 1?

A. Yes, sir.

Q. Now, we jump to item 32. There is a mechanical engineering item, one per cent.

A. Yes, sir.

Q. Of $652,000. You have already explained what that is for. And your item 1 covers "Engineering, 3 per cent. of all items from 2 to 26 inclusive?"

A. Yes, sir.

Q. Then you provide another item of ten per cent. for legal expenses, personal injuries, which covers all items from 1 to 32 inclusive, which amounts to $41,000,000. Do you think that that ten per cent. is fairly applicable to the right-of-way and station grounds that have already been covered?

A. Yes, sir.

Q. You think that ten per cent. should be added to that?

A. You have got to add it.

Q. Notwithstanding that it has already been testified by Mr. Cooper that, as near as he can determine, the actual cost of reproduction of those things, allowing for everything, is $114,000,000?

A. Yes, sir.

Q. Now, notwithstanding he has testified, as I say, that that is what it would cost to reproduce today, you still want to put ten per cent. more on it?

A. The price of that property has got nothing to do with the ten per cent.

Q. Yes, but it is required under this testimony.

A. Yes, but that has got nothing to do with it.

Q. All right.

A. That ten per cent. of those different items created a fund that is used to cover these items that I have referred to in here. Now, you have got to get the ten per cent. of the right-of-way in order to get funds enough to cover the incidentals that come up, that you cannot account for.

Q. Oh, then you figure that in the construction of this road there would be, in round numbers, $42,000,000 that would have to be provided for, no matter whether it was in percentage form or otherwise?

A. Yes, sir.

Q. When you speak of contingencies and provisions of that kind, Mr. Darling, as applicable to building a road, is it not a fact that that sort of a contingency is applicable to a road that is to be built where none has been built before?

A. Well, that is one contingency that comes in providing

for unforeseen conditions. There will be more unforeseen conditions, perhaps, in a road that has never been constructed, in that you don't know anything about the contiguous country, than there would be in this.

Q. In this instance the problem that you have is, to take the Northern Pacific Railway Company with all of these various problems solved as to floods and as to freshets and as to washouts, so far as human experience could solve them; in other words, you know now on the Northern Pacific where a culvert ought to go in, where probably you didn't know before; you know now today where there are slides, which you didn't know on the start. Do you mean to say it requires the same percentage of contingency, when you are given a problem where every factor is understood and where every factor is not understood?

A. No, sir, I don't. But, in the first place, if you are making an estimate, as we always do before a line is constructed, and use a ten per cent. contingency, ninety-nine times out of a hundred it very much overruns that contingency. Now, I have got to provide a contingency here that will show a fair cost for the reconstruction of that line. In other words, I have got to provide a better contingency than if I had all the money in the country to draw from.

Q. Now, I perhaps could ask one or two other questions. Let us take up this question of freight. You never figured before, did you, Mr. Darling, in any estimate that you made for the construction or reconstruction of this railroad, freight at tariff rates on construction material?

A. No, sir.

Q. This is the first time you ever did that?

A. Yes, sir.

Q. And that has very considerably increased the former estimate, hasn't it?

A. Yes, sir.

Q. Now, in connection with that estimate, I just want to ask you something about that, too. Take, for instance, the question of rails. As estimated there, at $13 per ton, that is based on the average haul of every rail in the system—sidings, main line and everything, isn't it?

A. Yes, sir.

Q. Quite immaterial whether you hauled it out on your own road or not?

A. It makes no difference how you haul it.

Q. Makes no difference at all?

A. No, sir.

Q. And on the basis of $13 per ton, the average haul, you did not even select the lowest tariff that has been on your lines, did you?

A. No, sir, we take tariff rates.

Q. You did not, for instance, select a tariff under which rails could be shipped to China?

A. Oh, no; no.

Q. But you took the tariff rates?

A. We took the tariff rates.

Q. And in that way it has made a very, very great difference in the cost, hasn't it?

A. Yes, sir.

Q. Now, as a matter of fact, that is not the way rails are hauled when a road is being built, is it?

A. As a matter of fact it is, exactly.

Q. It is.

A. Yes, sir.

Q. Then you think that all the roads charge tariff rates, do you?

A. I guess I didn't understand your question.

Q. No.

A. Our charges were at the rate of four-tenths of a cent per ton per mile for all construction work hauled out on the main line.

Q. And some roads don't charge anything, do they?

A. I don't know as to that.

Q. Don't you know that the Harriman system doesn't make any charge?

A. I don't know it.

Q. For instance, we are constructing this line and are taking twelve years to construct it.

A. Yes, sir.

Q. So that, as you construct it, you get portions built, of course, that you can operate; then you put in sidings, double tracks and what not. Now, as you go along constructing, you can haul your own rails, can't you?

A. You can if you don't care when you get it done.

Q. Oh, well, but I mean when you put in sidings and things of that kind, there is no such great rush about that, is there, always?

A. Oh, no. The stuff that you haul in after you get your line down, you haul that in over your own railroad.

Q. That is what I say. The additional sidings and the additional work you haul in over your own railroad.

Q. And your branch lines you can haul in over your own road?

A. Oh, no, no.

Q. You can't do that?

A. A few of them you can, but the biggest part you can not; you have to haul them in in some other way, if you are going to get it done by the time I said.

Q. Then, you think the Northern Pacific, for its branch lines, is sending its rails over the Harriman system, or the Great Northern? or do you think it is hauling them itself?

A. The Northern Pacific itself?

Q. Yes.

A. These are the additions that are going in after the line is done, and of course they are going in over their own rails.

Q. I understand. But this system of the Northern Pacific that you are testifying about is in many places double-tracked.

A. The system I am talking about hasn't got a rail.

Q. Oh, yes; completed it has.

A. Oh, yes, completed it has; completed it has, yes, sir.

Q. And you complete several hundred miles each year under your own arrangement?

A. Yes, sir.

Q. You are going to use them aren't you?

A. Yes, sir.

Q. And they do use them as a matter of practice, don't they?

A. Use our own rails in hauling out stuff?

Q. Yes. Don't they haul their rails around over their own line?

A. Sometimes they do and sometimes they don't. It depends on conditions. It depends on the particular piece—

Q. How can they get the rails to the front except over their own rails?

A. On some other fellow's rails. We would get material out where we could use it to advantage.

Q. I ask you this: How would you get your own rails to the front of your own line to where you are laying track?

A. You mean where we are building a branch line or a side track?

Q. I don't care whether it is main line or what it is.

A. I want to know the conditions you are talking about. You state your conditions and I will try to answer.

Q. Suppose you are building a main line of railroad, how do you get your rails to the front?

A. Do you mean building a line of road that has got no railroad rails?

Q. Suppose it has some rails, and you are going on building, laying track; how do you get it there?

A. Get what there, and get it where?

Q. The rails.

A. Is it an extension? Is it a branch line? Is it a sidetrack, or what? I don't know what you are talking about.

Q. Say, for instance, you are laying track between Pasco and Portland—so as to make it perfectly plain.

A. You mean an extension of the present main line?

Q. We will say that, then.

A. Very well. We haul it over our own main line.

Q. And down over your extension?

A. Yes, sir.

Q. And continue to lay, don't you?

A. Yes, sir.

Q. Right ahead of the car?

A. Yes, sir.

Q. And you do that with the main line, don't you?

A. We do that in the extension of a main line; but if we were going to build a line from here to Portland, we couldn't do such a thing as that. For the first portion, from here to Fargo, we would lay some of it from the St. Paul end; we would lay some of it from the Fargo end; we would lay some of it from some intermediate point. In order to get that rail to lay we have to ship it in from somewhere else.

Q. On this estimate you have figured that full tariff charges have been paid on every rail, no matter where it came from?

A. Yes, sir, I have.

Q. And you think that is a fair way to estimate to a court who has to pass upon these things between shippers and carriers, or anybody else—a fair way to estimate what the cost of a road would be?

A. I will tell you as a matter of fact that it costs more to haul over constructed lines, over your own track that is not ballasted or is not in shape—it costs more than tariff charges amount to.

Q. Now, if that is true—for instance, taking your contracts on the North Bank road; what sort of an arrangement do you have with your contractors about delivering their equipment?

A. We deliver it free of cost—pay the freight.

Q. And what is your contract about the delivery of the men to the work?

A. We deliver the men to the contractor.

Q. Free of cost, don't you?

A. Yes, sir. Well, free of cost to him?

Q. Yes.

A. Yes, sir.

Q. And they simply travel in the same passenger trains that the other passengers travel, don't they?

A. Why, sometimes; unless there are two or three men too many, when they have to make up another section, or a special train, or put on another car.

Q. They wouldn't put on another section for two or three men, would they, Mr. Darling?

A. At the time they were building the Portland & Seattle I saw train after train go out of the Union Depot in two sections because they had too many men on.

Q. You said two or three too many.

A. Well, we have to limit the men that go, and we have to limit the cars that go. The Superintendent of transportation calls us up every morning and wants to know how many men are going, and wants to know if we cannot send them out on No. 2 or No. 3. We have to put two sections on.

Q. Now let us take up a little thing that is, I think, of some interest. You have got ties in here at 55 cents. In arriving at that 55 cents—and this is made up now as of April 12th—please state to the court what you figure a fir tie costs on the Pacific coast at this time.

A. At this time?

Q. April 12th.

A. On April 12th I think a fir tie would cost at the mills about 35 cents—38 cents at present prices.

Q. What did you figure it at in here?

A. I figured the general average 55 cents. I think fir ties we figured about 44 or 45 cents.

Q. And there are a great many million fir ties, aren't there?

A. Yes, sir, a great many of them.

Q. So you have figured that higher than the facts would justify, haven't you?

A. No, sir.

Q. As of April 12th?

A. My prices are not made exactly as of April 12th.

Q. That is what you have testified to here.

A. No, sir, I don't think so.

Q. Then these prices are not as of April 12th?

A. No, sir, not as of April 12th. I testified that my prices are fair prices to pay for work done in twelve years, and they are a fair average of what work has cost say the last five or six or eight years.

Q. I see. Now, then, the transportation of these ties at 14 cents per 100 pounds, that is the regular lumber rate, is it not, the regular tariff rate—14 cents per 100 pounds?

A. No; that is the tariff rate for 200 miles haul, I think.

Q. That is what I say.

A. Yes, sir.

Q. Is that the rate put in by the Commission in this case, or the advanced rates?

A. That is the rate which we get from the traffic department for a haul of 200 miles.

Q. Then you are probably following the Interstate Commerce Commission rate. As a matter of fact you haul your own ties, don't you?

A. Yes, sir.

Q. And you don't pay any such rate?

A. Well, we haul our own ties when we can. But if we are building a railroad we may have to get them in over some other line.

Q. So that you have assumed in every instance that every tie that would go to this reproduced railway would have to pay tariff rates to somebody?

A. Yes, sir.

Q. And you think that is a fair way to estimate the cost of a road?

A. Yes, sir, I do.

Q. And you think, if you were estimating the cost of building a road for somebody, that you would prepare and submit to him an estimate based upon paying tariff rates upon his ties to some other road, for every mile of road that he built?

A. If I was making an estimate for some capitalist who was going to build a new railroad, I would have to do it.

Q. You would do it that way?

A. Yes, sir; couldn't do it in any other way.

Q. And you say that as an engineer?

A. Yes, sir.

Q. And that is the way your experience has shown you—

A. That is the only way you can do it. Now, I am talking about a capitalist going to build a new railroad.

Q. Yes, I know. We are talking about the same thing.

A. Yes, sir.

Q. And running all through these track fastenings, and the rails and the frogs and all the material that go into the construction of this road, you figure tariff rates on everything as though it was paid to somebody else?

A. Exactly.

Q. And that has very much increased the cost of this road over any of your previous estimates, hasn't it?

A. Yes, sir.

Q. And is one of the principal reasons for the increase, isn't it; it makes a very large amount?

A. Yes, it makes a very considerable increase—tariff rates.

Q. For instance, take your price on rails: On what is that based?

A. Based on St. Paul delivery at the rates $28 a ton at Chicago, plus $1.75, I think it is, freight to St. Paul, plus our inspection at the mills, plus one handling in transit and at the material yard. That makes $31.

Q. Is that the present price?

A. The present price at the mills is $28.

Q. I say is that the present price that you are using now?

A. Yes, sir; it has been for a good many years.

Q. You think that that would be a fairly representative price at the mills for a series of years—five or six years?

A. Yes, sir; unless rails went up. That has been the price for several years. It hasn't varied.

Q. That is what I mean. That is what I was asking you.

A. Yes, sir.

Q. Do your books, so far as you know—I don't know that you know of it all—show the actual cost of the construction of the Northern Pacific Railway Company?

A. As far as I know, they don't. I have hunted for it time and time again and I can't find it.

Q. In these different items there is no particular item for labor cost, or at the rate per day. You have figured it so much a cubic yard for rock work, and dirt, and things of that kind?

A. Yes, sir.

Q. Allowing it to appear in that way. On this question of equipment I would like to ask a question or two. Have you got your freight figured in on your interlocking plants, too?

A. Sure. I hope so. I intended to.

Q. You don't think you have overlooked that?

A. No, sir, I don't think so.

Q. And your signal apparatus, too?
A. Yes, sir.
Q. Well, I didn't want anything overlooked. Now, in these different buildings that you spoke of, figuring out the cost, I think you spoke of the St. Paul depot as one, didn't you?
A. Yes, sir.
Q. And Tacoma?
A. St. Paul station in Tacoma?
Q. And Tacoma.
A. Oh, St. Paul and Tacoma general office buildings?
Q. Yes.
A. That is the headquarters building.
Q. How did you arrive at that cost?
A. Why, we took the plans which we have on file in St. Paul and made our estimate from those plans.
Q. Of course you don't wish to be understood to say, Mr. Darling, that they don't know what that building cost in Tacoma, do you?
A. I don't. Possibly they do. But I think we know in St. Paul what the Tacoma office building and what the general office building cost. I think we have those records complete.
Q. How did your estimate of cost as it appears in here figure out with the actual cost?
A. I think they are almost identical.
Q. Almost identical?
A. Yes, sir; I think so.
Q. How long has that building been built?
A. The St. Paul?
Q. No, Tacoma.
A. I couldn't tell you. I don't know when Tacoma was built, but I presume it must have been somewhere from 15 to 20 years. I don't remember when it was built.
Q. You didn't allow anything for depreciation?
A. No, sir, not a cent.
Q. You just figured like you would build a new building?
A. Exactly.
Q. And in that instance you were not figuring the cost of reproduction of that building as it stands?
A. I was figuring the cost of the reproduction of the system. If I go to work and figure depreciation on buildings, I have got to figure appreciation on road bed, and that is an almost impossible thing to do; but it would go immensely higher than any depreciation on buildings or anything else.

Q. Then you think you are entitled to appreciation on the road-bed?

A. I haven't provided for any in my estimate, no, sir.

Q. So then, with these station buildings and fixtures, the question of their age or how long they have been in use had nothing to do with it; you just figured out the present cost of reproduction?

A. I figured out the present cost to reproduce, as near as I could, this property.

Q. Now, speaking of those station buildings and office buildings.

A. The station buildings and office buildings were figured at what it would cost to reproduce them now.

Q. That is what I wanted to know. At present prices of materials?

A. No, sir, not at present prices of materials.

Q. At what prices?

A. At such prices as we would have to pay during the next twelve years, or such prices as we would have paid during the past seven or eight years.

Q. Which is it?

A. Either way.

Q. No, excuse me. At the prices you are going to pay for the next twelve years, or the prices you did pay for the last twelve?

A. I assume the prices we would have to pay for the next twelve years would be about the same prices we paid during the past seven or eight years.

Q. Then you are figuring the prices for the next twelve years on this?

A. Yes, sir; and I am figuring the prices for the last seven or eight years, both.

Q. Now, we will take up the next thing here. Take your shop machinery and tools. What does that item represent?

A. It represents the cost of reproducing those tools—new.

Q. New?

A. New, yes, sir.

Q. This dock and wharf property, where is that situated—$5,000,000 item?

A. Duluth, Superior, Tacoma, Seattle, Portland, Kalama.

Q. What wharf property is figured in at Portland?

A. I guess I am a little wrong about Portland. I don't know as we have got a wharf at Portland.

Q. Somebody is building a big one. I was just wondering who it was.

A. That is Portland and Seattle.

Q. Because we are very anxious to have it built. Now, the wharves at Tacoma have been built quite a long while, haven't they?

A. Yes, sir.

Q. And there is considerable difficulty with teredos all over the Sound and down to Portland, isn't there?

A. Yes, sir.

Q. In those dock and wharf properties you figured the replacement of those new, just the same as you did the others?

A. Yes, sir.

Q. Now, taking up these locomotives and the passenger train cars: was there any allowance made for depreciation in the rolling stock?

A. I can't tell you, sir, but I think not. I presume not. That was made by the superintendent of motive power as the cost of reproduction, but I cannot tell you whether he allowed depreciation or not.

Q. Well, that can be ascertained?

A. I presume he can testify as to that, yes, sir.

Mr. Teal: Well, I would like to have whoever got up this part of the statement.

Mr. Donnelly: The superintendent of motive power, do you know his name and whether he is in town?

The Witness: William Moore. I think he is.

Mr. Teal: And he is the one that would get up the passenger train cars also?

The Witness: Yes, sir.

Q. I believe I asked you if you would bring your Spokane estimate tomorrow morning?

A. Yes, sir.

Q. And would you object to bringing your estimate for the State Railroad Commission, also?

A. No, sir; no objection that I know of.

Q. Do you know whether the mileage that you have estimated here agrees with the mileage reported to the Interstate Commerce Commission, or with the annual report of the stockholders of the Northern Pacific Railway?

A. It agrees with the annual report of the stockholders, with the additions made since.

Mr. Teal: I would like to have the opportunity to confer a little bit further over these. I have got certain matters established now that I wanted.

The Master: Perhaps, then, we had better take an adjournment at this time.

Mr. Teal: Yes, if the court is willing.

Mr. Wimbish: May I ask this witness a question before adjournment?

The Master: Very well.

By Mr. Wimbish:

Q. Mr. Darling, isn't railroad construction frequently let out to contractors?

A. Yes, sir.

Q. On a cost or percentage basis?

A. Certain portions of it, yes, sir.

Q. Do you know the usual charges of contractors, what percentage they usually get over the cost of construction?

A. I know what some get, yes, sir.

Q. As a rule, I mean—I mean the average price.

A. The average price, of course, depends entirely on the job, how heavy a piece of work it is, what territory it covers, and under what conditions he takes it. Everything varies so, it is hard work to make any specific statement.

Q. The percentage of contracts varies very much, you think?

A. Yes, sir.

Q. Well, what are those limits?

A. I should think the limits would be from about 3 to 10 per cent.

An adjournment was here taken until the morning of Thursday, April 15, 1909, at 10 o'clock.)

Room 326, Federal Building, St. Paul, Minn.,
April 15, 1909, 10 A. M.

The hearing was resumed before the Special Master, Hon. Frederick N. Dickson, at the above time and place.

Present:

On behalf of the Complainants, Mr. Hale Holden, Mr. Charles Donnelly, Mr. F. C. Dillard.

On behalf of the Defendant, Mr. Luther M. Walter, Mr. W. A. Wimbish, Mr. J. N. Teal.

WILLIAM L. DARLING, recalled, and his cross-examination resumed:

By Mr. Teal:

Q. Mr. Darling, in this statement of yours of April 12, I wish you would state how many miles of main track you figure there is on the Northern Pacific Railroad.

A. 6,035.72 miles.

Mr. Donnelly: That is, main track?

The Witness: Of main track.

Q. Now, according to this estimate, what do you figure the cost per mile of reproduction of the main track?

A. Including all terminals?

Q. Omitting terminals.

A. Omitting what terminals?

Q. Omitting all terminals. Let us put it this way: suppose that you were asked, as an engineer, what the cost of construction of the main line of a railroad would be, what would it mean to you?

A. It would mean the construction of the railroad and terminals.

Q. Very well. Then, if that is what it means that is what I mean.

Mr. Donnelly: By "main line" you mean main line and branches?

Mr. Teal: I mean main line.

The Witness: Yes, sir; that means the main line of the main railroad and the main line of all branches.

Mr. Donnelly: Yes.

A. If you will excuse me just a minute I will figure it for you. Approximately, $103,000 per mile.

Q. Did you bring the statement that I asked you for that you introduced in the Spokane case?

A. Yes, sir.

Q. Have you it there?

A. Yes, sir. I will have to ask to have it returned. It is the only one I have—until such time as I can duplicate it.

Q. Yes. I shall probably have some copies made. How many miles of main track, on the same basis that I have just asked in the previous question, did you figure in this statement in the Spokane case?

A. 5874.91 miles.

Q. Please state what you found the cost per mile, on the same basis, under that statement.

A. I never made a statement on the same basis, sir.

Q. Please state what the cost per mile of road was as shown by that statement.

A. This statement? Can I tell you what this statement means?

Q. After you answer the question.

A. All right, sir.

Mr. Teal: I prefer to have these questions answered. They are on cross-examination. He can explain them afterwards.

Mr. Donnelly: But he ought to be permitted to state the difference between that statement and this one.

Mr. Teal: He will have ample time to do that. All I want is to get these figures first.

The Witness: Approximately $52,000 a mile.

Q. Approximately $52,000 a mile?

A. Yes, sir.

Q. Included in that, and not included in this statement, was $50,000,000 for coal lands, was there not?

A. No, sir.

Q. You are sure of that?

Mr. Dillard: Mr. Teal, excuse me a moment. The witness stated after answering your question that he wanted to explain fully.

Mr. Teal: He will have plenty of opportunity. I simply want to ask this question.

Q. You say there was not $50,000,000 for coal lands in there?

A. No, sir.

Q. Now, if you desire to make any explanation you may make it.

A. This estimate is exactly what it purports to be on the

face of it. The cost of reproducing the improvements on the Northern Pacific estate is not the cost of the Northern Pacific railway system by any means. It is a statement of figures made up mostly under the direction of the counsel. For instance, that statement carries a column of "Depreciation." I protested against any column of "Depreciation" and testified to it in Chicago. It also carries freight on the basis of 4/10 per cent. a ton a mile. I protested against the use of any of those figures. And, in addition to that, that is not an estimate, nor does not purport to be an estimate, of Northern Pacific Railway property.

Q. What does it purport to be?

A. It purports to be an estimate (made under partial direction) of improvements on the Northern Pacific system, on the Northern Pacific real estate.

Q. Let us understand what you mean, Mr. Darling. You say that that does not purport or was not introduced in evidence to show the cost of reproduction of the Northern Pacific system?

A. No. sir; never was.

Q. Just state what it was, and what it was introduced for, and what you testified to about it.

A. When that statement was made up it was my understanding that the cost of the system was to be estimated, and testimony brought before the Interstate Commerce Commission in Chicago to show the cost of reproducing that property. I told them there was no such thing; that property well-maintained cannot depreciate.

Mr. Dillard: Mr. Darling, as to that single item of depreciation, doesn't the seasoning of the road far overbalance it?

The Witness: Yes, sir, far overreaches it.

Q. When you say that this covers just the cost, you mean the cost of what, of the Northern Pacific?

A. Of the improvements.

Q. Now, what do you mean by that?

A. I mean exactly what this says here.

Mr. Donnelly: Right at the outset, Mr. Teal, I may state that there is $114,000,000 for real property figured in the statement which you are examining him about, introduced yesterday, and was not included—

Mr. Teal: We will get that presently.

The Witness: I can show you practically where the differences are.

Mr. Teal: Well, we will have this introduced, and this will speak for itself, won't it?

Mr. Donnelly: Of course, the records in the Spokane case are available.

Mr. Teal: Yes; but we will have this copied in this case. I would like to have this introduced in evidence and marked, I presume Defendant's Exhibit 1.

The Witness: I would like to get that back and make duplicates of it.

Mr. Donnelly: We will supply you copies of that.

Mr. Teal: I am not going to take this original.

The Master: You are offering this as part of the cross-examination?

Mr. Teal: Yes, as part of the cross-examination. So that the reporter will understand what it is, it is headed: "Cost of Improvements on Estate of the Northern Pacific Railway, including 2860.67 miles of single and second track of main line, 3014.24 miles main and second track branch lines, and 1819.88 miles of spurs, sidings and yard tracks—total 7694.79 miles."

The Master: Have it marked.

Mr. Teal: This is going to be copied. When the copy comes it may be marked. You can just mark it on the top "Darling cross-examination No. 1."

(Said paper was marked Defendant's Exhibit 1 (Darling.)

DEFENDANT'S EXHIBIT 1.

Cost of Improvements on estate of the Northern Pacific Railway, including 2860.67 miles of single and second track of Main Line, 3044.24 miles main and second track Branch Lines, and 1819.88 miles of spurs, sidings and yard tracks—total 7694.79 miles:

	Cost of Producing.	Depreciation.	Present Value
Grading:			
Labor and material for laying track complete	$138,743,971	$1,065,963	$137,678,008
Grade revisions:			
1897–1901	2,350,600		2,350,600
Turnouts	1,838,750	20%	1,471,000
Permanent Bridges	9,960,248		9,950,248
Temporary Bridges	4,284,580	856,920	3,427,660
Culverts	3,091,000	72,000	3,019,000
Wooden Bridges filled	4,518,600		4,518,600
Tunnels	3,921,421		3,921,421
Fencing	707,290	20%	565,832
Snow Fence	537,600	20%	430,080
Telegraph	1,443,000	10%	1,298,700
Water Supply	1,971,200	20%	1,576,960
Coaling Stations	635,900	20%	454,240
Wharves and Docks, including dredging of channels	1,725,000	10 %	1,552,500
Stock Yards	152,857	20%	122,250
Track Scales	107,671	10%	96,904
Cattle Guards	57,195	20%	50,756
Roundhouses, Turntables, Power Houses, etc	1,680,448	10%	1,512,403
Shop Buildings	2,091,650	10%	1,882,485
Miscellaneous Buildings	1,578,528	20%	1,262,822
Warehouses	2,886,016	15%	2,453,113
Headquarters Buildings	756,600	10%	680,940
Furniture	440,000	20	352,000
Passenger Stations	1,102,304	20%	881,843
Combination Stations	1,408,960	20%	1,127,168
Duluth Union Depot	343,300	20%	274,600
St. Paul Union Depot	159,200		159,200
Interlocking	123,555	10%	111,200
Block System	44,307		44,307
Mile Posts and Signs	129,584	20%	103,667
Ash Pits	79,067	10%	71,160
Oil and Sand Houses	120,960	10%	108,864
Shop Tools and Machinery	1,100,000	20%	880,000
Kalama Ferry & Steamer	617,400	20%	493,900
Lines in Manitoba	7,000,000		7,000,000
Joint work, Seattle	2,457,000		2,457,000
	$200,155,762		$194,336,431

Engineering 3%	$6,004,673		
	$206,160,435		
Contingencies 10%	20,616,043		
	$226,776,478		
Interest 10% (2½ yrs. @ 4%)	22,677,648		
	$249,454,126	$5,819,331	$243,634,795
Freight Equipment	30,486,000	15.09%	25,885,400
Passenger Equipment	5,898,000	14.22%	5,053,300
Power	16,480,200	16.72%	13,724,000
Floating Equipment	497,000	20%	397,600
	$ 53,361,200		$ 45,060,300
Grand Total	$302,815,326		$283,695,095

DETAILS OF GRADING.

MAIN TRACK.			
Main Line	2,749.57 miles		
Double Track	110.85 miles		
Duluth Union Depot	.25 miles		
	2,860.67 miles	@ $9,941.00	$28,437,920.00
BRANCHES	2,679.75		
Double Track	1.53		
Spurs	309.12		
Yards and Sidings	1,455.38		
Wash & Col. River	168.86		
Spurs & Sidings	21.65		
Pt. Townsend Southern	43.63		
Spurs & Sidings	3.46		
M. & I. 70%	150.74		
	4,834.12 miles	@ 7,745.00	37,440,260.00
Clearing	22,036 acres	@ 80.00	1,762,880.00
Grubbing	30,851 stations.	@ 16.50	590,041.50
Earth	116,110,913 yards	@ .28	32,511,055.00
Hard Pan	38,703,637 yards	@ .42	16,255,528.00
Loose Rock	12,721,303 yards	@ .50	6,360,651.50
Solid Rock	9,051,266 yards	@ 1.10	9,956,392.60
Riprap	2,714,621 yards	@ 2.00	5,429,242.00
			$138,743,971.00

Average per mile 22,925 cubic yards excavation.

Earth	66%
Hard Pan, etc	22%
Loose Rock	7%
Solid Rock	5%

Appreciation 10% on $70,512,869	$7,051,287	
Depreciation 10% on steel, 25c. each on ties (See detail sheet)	8,117,250	$1,065,963.00
		$137,678,008.00

1898			Present (1907)	
Main Track & Branches	4,418.82		Main Track	2,860.67
Sidings	849.55		Branches & Sidings	4,834.12
	5,268.37	1.4605%		7,694.79

Quantities.		
Clearing	15,089 acres.	22,036 acres.
Grubbing	21,124 acres.	30,851 acres.
Earth	88,334,218 yards.	154,814,550 yards.
Loose Rock	7,258,532 yards.	12,721,303 yards.
Solid Rock	5,164,479 yards.	9,051,266 yards.
Riprap	1,548,911 yards.	2,714,621 yards.

1.20% x 1.4605% = 1.7526%.

Cost of One Mile of Main Track.

AVERAGE HAUL FOR STEEL AND TRIMMINGS 1,000 MILES @ .4c. PER TON PER MILE.

AVERAGE HAUL FOR TIES 400 MILES @ .4c. PER TON PER MILE.

AVERAGE WEIGHT OF ANGLE BARS 7.3 TON PER MILE, BOLTS .75 TONS, SPIKES 3.4 TONS.

Steel, F. O. B. St. Paul, including two handlings in transit	117 ton	@	31.00 per ton	3,627.00
Angle Bars	7.3 ton	@	34.20 per ton	249.66
Bolts	0.75 ton	@	55.00 per ton	41.25
Spikes	3.4 ton	@	42.20 per ton	143.48
Tie Plates	7.5 ton	@	44.00 per ton	330.00
Cost of Material, Yard and work therein	135.95 ton	@	1.00 per ton	135.95
Contract cost of laying track			357.50	357.50
Cost of one extra switch per mile		@	27.50	27.50
Rent of equipment, train service and hauling to the front		@	375.00	375.00
Ties, 3,000		@	.55	1,650.00
Ballast, 3,000 cubic yards		@	.66	1,980.00
Transportation of ties, rail, etc.				1,023.80
				$9,941.14

Ballast—contract price	$0.27	
Cost of shovels, etc	.03	
Transportation—60 miles @ 8.004.	.36	
Total		$0.66

Bolts, 1,500 per mile @ 1 lb. equals.....0.75 ton per mile.
Spikes, 34 kegs @ 200 lb., equals.....3.4 ton per mile.
Angle Bars, average weight 14,600 lbs., equals..7.3 ton per mile.
DEPRECIATION:

Ties, 3,000 @ 25c	750.00	
Steel, 3,627 @ 10%	362.70	$1,112.70

Depreciation is $1,112.70 x 2,860.67—$3,183,067.00.

COST OF ONE MILE OF BRANCH LINES.

Average weight of steel in branch lines, spurs and sidings, 97 ton	@	$31.00 per ton	$3,007.00
Angle bars, 6.46 ton	@	34.20	220.93
Bolts and Nuts, 0.75 ton	@	55.00	41.25
Spikes, 3.4 ton	@	42.00	143.48
Material Yard work, 107.61 ton	@	1.00	107.61
Cost of laying track	@	357.50	357.50
Cost of one extra switch	@	27.50	27.50
Ties, 2,880	@	.55	1,584.00
Rental of equipment, hauling to the front, train service, etc			375.00
Ballast, average 1,500 cu. yds.	@	.66	990.00
Transportation of steel, ties and trimmings			891.24
			$7,745.51

Depreciation:

Ties, 2,880 @ 25c	$720.00	
Steel, 3,007 @ 10%	300.70	$1,020.70

Depreciation is $1,020.70 x 4,834.12 miles equals $4,934,136.00.

COST PER CUBIC YARD FOR GRADING.

EARTH:		
Average haul, 400 ft	$0.22	
Overhaul	.03	
Transportation	.03	$0.28
HARD PAN AND CEMENT GRAVEL:		
Contract price	$0.35	
Overhaul	.04	
Transportation	.03	$0.42
LOOSE ROCK:		
Contract price	$0.42	
Overhaul	.04	
Transportation	.04	$0.50
SOLID:		
Contract price	$1.00	
Overhaul	.05	
Transportation	.05	$1.10

CLEARING:		
Contract price per acre	$75.00	
Transportation	5.00	$80.00
GRUBBING:		
Contract price per station	$15.00	
Transportation	1.50	$16.50
RIPRAP:		
Contract price, per yd	$1.75	
Extra haul and work	.15	
Transportation	.10	$2.00

COST OF TUNNELS.

Single track tunnels lined with concrete.

Lineal Feet.

100–700	700–1200′	4000′	10000′
3390′	1069′	7548′	9833′

Double track tunnel lined with concrete ..... 1,656 lineal ft.
Single track tunnel lined with wood ..... 4,919 lineal ft.

Cost of Tunnels.

Concrete, 24 inch thick equals 4.1 cu. yd. per ft. of tunnel.

Concrete	$9.00	Contract price
1¼ bbl. cement	2.50	
Freight	1.00	
	$12.50	

Concrete, $12.50 x 4.1 equals $51.25 per lineal foot of tunnel.

TUNNELS.

100′ to 800′—wood—is $50.00 plus 10% (See note) equals	$55.00	
Wood	24.75	$80.00
100′ to 800′—concrete:		
$50 plus 10%	$55.00	
Concrete	51.25	
Falsework	13.00	$119.25
800′ to 1,200′—		
$55 plus 10%	$60.50	
Concrete	51.25	
Falsework	13.00	$124.75
4,000′		
$75 plus 10%	$82.50	
Concrete	51.25	
Falsework	13.00	$146.75

4,000′ to 10,000′—		
$90 plus 10%	$99.00	
Concrete	51.25	
Falsework	13.00	$163.25

DOUBLE TRACK, SHORT TUNNELS.

Concrete, 5.2 cu. yds. @ $12.50	$65.00	
Extra excavation, 11.5 cu. yd. @ $3.00	34.50	
Contract price, $50 plus 10%	55.00	
Falsework	13.00	$167.50

NOTE.—10% is added to contract price for extra excavation.

AVERAGE COST OF TURNOUTS.

Ties	$54.00	
Switch stand	13.30	
Connecting rod	1.65	
Frog	33.00	
Rail braces	1.60	
Split switch	31.00	
Switch lamp	5.00	
Guard rails	8.80	
Freight charges	14.40	$162.75

BRIDGING, N. P. SYSTEM.

Howe truss spans exclusive of traffic charges	$ 608,380.00	
Traffic charges, 21,550 tons @ $4.00	86,200.00	$ 694,580.00
Steel and combination bridges, exclusive of freight charges	$8,894,848.00	
Freight charges	1,055,400.00	9,950,248.00
Steel, Combination and Howe Truss Bridges		$ 10,644,828.00
Cost of Bridge Filling		3,012,415.00
Pile and Trestle Bridges 359,000 lin. ft. @ $10.00		3,590,000.00
Total cost of Bridging		$17,247,243.00

	Estimated Cost	Freight Charges	Total Cost including Freight Charges
Fencing, 4,575 miles @ $150	$ 686,250	0.4c	$ 707,290
Water supply (including tanks, standpipes, wells, pipe-lines, etc.)	1,760,000	12%	1,971,200
Wharves and docks (1,750,000 sq. ft. @ 70c.)	1,725,000	.....	1,725,000
Coaling Stations	567,800	12%	635,936
Stock Yards (3,412,000 sq. ft. @ 4c.)	136,480	12%	152,857
Track Scales, 74 ($1,300)	96,135	12%	107,671
Cattle Guards, 3,464 @ $15.00	51,960	12%	57,195
Roundhouses, turntables, power houses, etc.:			
Frame, $1,300 per stall Brick, $2,100 per stall Turntables, $5,000 apiece	1,500,400	12%	1,680,448
Shop Buildings:			
Brick, one story $1.50 Brick, two story $2.50 Frame, $1.00 per sq. ft.	1,901,500	10%	2,091,650
Warehouses:			
Frame, $1.20 per sq. ft. Brick, $1.60 per sq. ft.	2,576,800	12%	2,886,016
Headquarters Buildings	756,600	.....	756,600
Passenger Stations:			
Ordinary brick, $2.50 sq. ft. Frame, $1.50 per sq. ft. Special, actual cost.	984,200	12%	1,102,304
Combination Stations:			
One story, $1.50 sq. ft. Two story, $2.50 sq. ft.	1,258,600	12%	1,408,960
Interlocking	123,195	4/10c	123,555
Mile posts and signs (5,785 miles @ $20.00)	115,700	12%	129,584
Ash pits	70,596	12%	79,657
Oil and sand houses ($1.50 per sq. ft.)	108,000	12%	120,960
Block System	39,560	12%	44,307
Misc. Buildings and Piping	1,409,400	12%	1,578,528
Snow Fence (320 miles @ $1,500)	480,000	12%	537,600

	Total Cost including Freight Charges	Depreciation	Present Value
Fencing, 4575 miles @ $150	$ 707,290	20%	$ 565,832
Water supply (including tanks, standpipes, wells, pipe-lines, etc.)	1,971,200	20%	1,576,960
Wharves and Docks (1,750,000 sq. ft. @ 70c.)	1,725,000	10%	1,552,500
Coaling Stations	635,936	20%	508,749
Stockyards (3,412,000 sq. ft. @ 4c.)	152,857	20%	122,250
Track Scales, 74 ($1,300)	107,671	10%	96,904
Cattle Guards, 3,464 @ $15	57,195	20%	45,756
Round houses, turntables, power houses, etc.:			
Frame, $1,300 per stall. Brick, $2,100 per stall. Turntables, $5,000 apiece	1,680,448	10%	1,512,403
Shop Buildings:			
Brick, one story $1.50. Brick, two story $2.50. Frame, $1.00 per sq. ft.	2,091,650	10%	1,882,485
Warehouses:			
Frame $1.20 per sq. ft. Brick $1.60 per sq. ft.	2,886,016	15%	2,453,113
Headquarters Buildings	756,600	10%	680,940
Passenger Stations:			
Ordinary brick, $2.50 sq. ft. Frame, $1.50 per sq. ft. Special, actual cost.	1,102,304	20%	881,843
Combination Stations:			
One story, $1.50 sq. ft. Two story, $2.50 sq. ft.	1,408,960	20%	1,127,168
Interlocking	123,555	10%	111,200
Mile posts and signs (5,785 miles @ $20.00)	129,584	20%	103,667
Ash pits	79,067	10%	71,160
Oil and sand houses ($1.50 per sq. ft.)	120,960	10%	108,864
Block System	44,307		44,307
Misc. Buildings and Piping	1,578,528	20%	1,262,822
Snow Fence (320 miles @ $1,500)	537,600	20%	430,080

Q. Now, Mr. Darling, you state that in making up that statement you prepared it—(the statement I refer to is the exhibit just introduced)—in accordance with instructions received from counsel?

A. As far as the items of depreciation and traffic charges are concerned. Nothing else.

Q. Nothing else.

A. No.

Q. Other than those two items, did that statement represent your honest judgment at that time as the cost of reproducing the different items?

A. Made on the basis which I have testified.

Q. Well, tell me again what basis. I don't understand what you mean. I suppose you are called as an expert engineer—

A. Yes, sir.

Q.—and are telling this court what you think, and not what the attorneys think about this.

A. Yes, sir. But you have to make an estimate on some basis. You have to make some assumption. That is the first thing you do in making an estimate—you make certain assumptions, and those assumptions are the basis of the estimate.

Q. What assumptions in there (I refer now to the Spokane exhibit) are not yours?

A. These estimates for improvements were made on the basis of the prices which it would cost to reproduce those items in ten years, I think it was, and at the prices about then prevailing. It also provided that certain lines, as soon as they could be finished, were to be turned over to operation; that the operating department was to carry the interest charges during construction and charge it to profit and loss. Now, that was to be paid out of future earnings, if there were any; of course, if there were not, it would have to be charged against construction, for which nothing was provided in my estimate.

Q. Were those assumptions your own, or were those what you were told to make?

A. Those assumptions were my own, sir.

Q. And when you were sworn in that case and testified in that case as an expert engineer, you believed that your assumption was sound and right, didn't you?

A. Well, it was certainly sound and right, if there were

any earnings afterwards to pay for those interest charges, and which I had a right to assume there would be in the course of time; but those earnings would later on have to be credited back to construction.

Q. That is true; but I say that was your honest judgment at that time?

A. Yes, sir, it was.

Q. Whatever is shown in any of those figures, excepting the part that was suggested by counsel as differing from you, was your honest conviction as an engineer at that time?

A. Yes, sir, it was.

Q. And that testimony was given about March, 1907?

A. Something like that, yes, sir.

Q. Will you examine that exhibit and see what interest charge you allowed there at that time—for what length of time?

A. The interest charges on the amount of money involved in my estimate were $22,627,648.

Q. And the interest charges now involved are $164,000,000?

A. Yes, sir.

Q. A year and a half later, on about 250 miles more of road?

A. That is correct. I would like to withdraw that answer and say that it is not on 250 miles more of road, but it is on the whole road.

Q. On the whole road?

A. Yes, sir; including 250 miles more.

Q. Have you figured up the freight charges that you now estimate in this present estimate?

A. No, sir.

Q. How many million dollars they amount to?

A. No, sir, I have not. They are included in the different items, as is called for in the Interstate Commerce Commission distribution.

Q. Would you say whether or not the freight that you have provided for as a part of the charge of construction of the Northern Pacific is over $26,000,000?

A. No, I would not—

Q. You wouldn't think it was that much, would you?

A. I wouldn't testify to that, because I don't know.

Q. But it will show in there, will it not?

A. It will show. It can be picked out of our details, yes, sir.

Q. And can you give the court some idea of the freight charge that you figured in the Spokane case, in dollars and cents?

A. No, sir, I don't think so. It was figured on the basis of 4/10 of a cent a ton a mile, though.

Q. Now, the depreciation charges in the Spokane case amounted to several million dollars less than they do in this case, did they not?

A. Depreciation?

Q. I mean the amount provided for contingencies and engineering charges.

A. Yes, sir.

Q. And when you testified in the Sokane case you were testifying as an expert engineer to tell the truth and nothing but the truth?

A. Yes, sir.

Q. And to the best of your ability you did so?

A. Yes, sir.

Q. And since that time you have had about a year and a half more experience as an engineer?

A. Yes, sir.

Mr. Donnelly: Well, it is two years, if you are going to be accurate about it.

Q. Well, two years' more experience, then, as an engineer?

A. Yes, sir. But I would like to say that in those two years I have probably done about twice as much work as I ever did before in all my life put together. I would also like to say that the estimates I made at the beginning of this work, which we have just completed, have been very far over-run, notwithstanding the fact that I allowed ten per cent. for contingencies.

Q. On your examination in that case you gave your experience as an engineer?

A. Yes, sir.

Q. And stated also that you felt you were qualified to pass upon those things, didn't you?

A. Yes, sir.

Q. And did you feel so?

A. Yes, sir.

Q. And you feel so now?

A. Yes, sir.

Q. Now, on this statement, what I would like to know—

I am asking you now as an engineer—is this statement made up in accordance with your ideas?

A. It is, exactly.

Q. And this is the way you think?

A. Yes, sir.

Q. As an engineer?

A. It is correct.

Q. —you would build a road if you had money to build it with?

A. Well, if I was to reproduce the Northern Pacific system, I would do it in this way. If the road was to be built for commercial purposes it might not be built in that way.

Q. If you were going to build a road for commercial purposes you would not build it in that way, would you?

A. No, sir; I would spread that over a big series of years.

Q. And you would build it so it would earn something as it went along, wouldn't you?

A. I probably would. I would try to, anyway, if I could.

Q. And how long do you think, in your judgment as an engineer, that in the states of Minnesota and Dakota and Wisconsin, with your terminals all ready and your rights-of-way ready, in the country as developed today, you would last as chief engineer, if you would build roads that would not earn anything for ten years?

A. Well—

Q. I would like to know, now.

A. Well, the best way to do is to judge by roads that have been built.

Q. Yes. I was going to ask you about that. You, of course, know about the operating conditions of roads in Minnesota and Wisconsin and the Dakotas, do you not?

A. Yes, sir, a few.

Q. In recent years?

A. A few, yes, sir.

Q. You know, of course, they file their sworn reports here with the Minnesota Commission?

A. Yes, sir.

Q. The fact is you have been on the stand, have you not, in some of these cases involving changes in freight rates?

A. In connection with valuation of property, yes.

Q. Will you please state whether or not the earnings of, we will say, the Northern Pacific (being the road you are familiar with) in Minnesota and Wisconsin and Dakota, for

the last two or three or four or five years, have been in excess of operating expenses and fixed charges?

A. My impression is that they are not.

Q. They are not?

A. That is, for business derived from the state.

Q. That is your impression?

A. Yes, sir.

Q. And therefore, that they have been operating at a loss?

A. That is, from business derived from the state, yes, sir.

Q. Now, this is getting interesting. I did not know you knew about this traffic condition. Now, we will take the through business. It is the through business that pays the Northern Pacific?

A. Well, it is the total business that pays the Northern Pacific. I am not an expert enough in traffic matters to testify to that.

Q. Yes, but you have testified. I want to know what you know about it.

A. You have asked me what my impression was.

Q. You have stated that it was your impression that on the business in Minnesota and the Dakotas and Wisconsin the Northern Pacific was not making any money?

A. Yes, sir.

Q. Not paying operating expenses and fixed charges?

A. That is my impression.

Q. That is your impression?

A. Yes, sir.

Q. Is it a fact that the Northern Pacific is making any money?

A. I think they are.

Q. They are paying dividends, are they not?

A. Yes, sir.

Q. And have been for a number of years?

A. Yes, sir.

Q. They have been carrying lots of surplus, too, haven't they?

A. Yes, sir; I understand so from their books.

Q. And have been considered a pretty good road?

A. Yes, sir.

Q. Now, where is your idea that this money comes from out of which these dividends are paid?

A. It is in total, the earnings in total; the through earnings and local earnings.

Q. But if the local earnings do not pay expenses, then it must be made up from some source?

A. I have never analyzed those earnings. I couldn't tell you.

Q. It must be mathematical, musn't it?

A. Oh, they must come from somewhere.

Q. Yes; but if your local earnings in the Dakotas, Wisconsin, and Minnesota do not pay the cost of operation, and your total returns are far in excess, so that you can pay dividends, as a mathematical proposition it comes from some other source, doesn't it?

A. It must.

Mr. Holden: Now, if your Honor please, I want to make an objection here. It is not fair to this witness, in the first place, to get into a traffic argument and into a mathematical argument about matters that appear on the face of the annual reports. This witness is called as an engineer. He was asked by counsel to prepare a table of figures representing his judgment as to what it would cost to reproduce the Northern Pacific system. Now, that is as far as he has been put upon the stand as a witness to go. He is not responsible for anything else in connection with this litigation. Mr. Teal has proceeded to fall into a debate with him here as to whether two and two make four, and whether certain traffic matters are or are not as he seems to think they are. It is getting merely down to a basis of argument between the witness and counsel on matters that the witness is not called upon. It is not proper cross-examination. It ought to be limited to the issues that this witness has been brought here to meet. As I say again, he is simply brought here as a civil engineer, a railroad engineer, to give his judgment as to what it would cost to reproduce this property, and that is one of the elements—a mere evidential matter—in the final proposition of determining the fair value of the property. That is one way of getting a strong light on that question—to find out what it would cost to duplicate it. That is the purpose of this testimony. If we want to know what anything is worth, we naturally first of all look to see what it would cost to get it again, to get another one like it. That is not the final test of value, but it is a strong element in the consideration of the question. Now, we want to make that point

clear. Mr. Darling has not been called here even as a witness to testify as to the value of the Northern Pacific system. He has merely been asked by counsel who are conducting the theories and expect to present the law on the subject, to prepare a table of figures, based upon his experience and knowledge as an engineer, as to what it would cost to reproduce this system, physically, as it stands today. That will help us and help both sides, and help your Honor in finding out the ultimate fact as to what is the value of the property that is devoted to the public service. Now, I say there is the limit to which his cross-examination should go. It should bear upon that and not degenerate into an argument with him upon matters that are disconnected wholly with his connection with this company, and particularly his connection with this case. We never will get through.

Mr. Teal: Well, counsel will try not to degenerate, if counsel on the other side will try to keep in their place and in their position. This statement, prepared by this engineer as a part of his direct examination, shows on its face a condition which represents twelve years of railroads in this country without any earning capacity even sufficient to pay interest. In order to prepare that statement, unless it was prepared purely arbitrarily, and for the purpose of this case, Mr. Darling must have given some thought to this subject.

Mr. Holden: Mr. Teal, may I interrupt you?

Mr. Teal: Pardon me.

Mr. Holden: Well, go ahead.

Mr. Teal: And my cross-examination is directed to ascertaining by what process he arrived at a result which would create a charge of $164,000,000, when, on substantially the same road, two years ago, he created a charge of $22,000,000 as part of the cost of construction.

The Master: I understand this claim, or statement, here is that that is what it would cost to build this road if he had to do it in the quickest possible manner, without regard to any business policy in building it; that is, if he was called upon to duplicate this system in the quickest possible manner that it could be done, without regard to whether or not money was earned while it was being built, that he could duplicate it in 12 years for this amount.

Mr. Teal: Well, I don't understand that that even is the theory. If this statement is not introduced for the purpose

of showing the reproduction cost, from Mr. Darling's standpoint, of the Northern Pacific Railroad Company—certainly as railroads are built and as railroads are operated and constructed in this country—of what use is it if it is not for that? And if he uses as a basis an entire lack of earning power for 12 years, on present day conditions throughout such a country as this, then I want to know that absolutely and want to know what his reasons are for using any such basis.

Mr. Holden: Let me just make a statement. There is where I think we are not thinking clearly on this subject and are not dealing fairly with the record. As I say again, Mr. Darling has been put on to show what in his judgment it would cost to reproduce the property. Now, as a part of that problem you have got to have some money and you have got to have it over a period of years. You have got to assign some period as a basis for your problem. We know that the Northern Pacific road actually took over 40 years to build. That wouldn't do in a problem of this kind; so we take the shortest time consistent with any element of economy. It is not the absolute condition, but it is a helpful basis for the court in determining this ultimate question of value. Now, then, a certain amount of interest has got to be paid. Mr. Darling has not testified here that there will be no earnings for any part of this road, and it is not fair to so represent him. On the contrary he yesterday said, "If you want my impression"—and that is all he said—"there will be no earnings"—meaning by that net earnings. Every pound of commercial freight that moves over a partially constructed road earns something. So I say the witness has not taken such an extreme attitude, Mr. Teal, as you seek to put him in. He is dealing with the amount of interest charges that in his judgment will have to be made during those ten years. Now, then, the problem for you, and perhaps for the rest of us in the further consideration in this case, is what, if any, would the net earnings be which might go as an offset to that. Now, I say Mr. Darling has not been called on that subject and he has not testified as to whether the net earnings which come from the small amount of commercial business that might exist would amount to a credit or not upon that interest. He has an impression, as he said yesterday, that there would not be any substantial net earnings. Now, we have got an ample amount of proof on that

subject, which we will tender to you later on; but I say that is not the proof which the chief engineer is called upon to meet, and that is not the basis of his testimony in this case, and it is not fair to say that he has testified that there will be no earnings of any kind for ten years during the construction of this road, because he has not so testified.

Mr. Teal: Let us make it twelve, because it is twelve.

Mr. Holden: Or twelve years. There is a difference between earnings and net earnings, and we should keep that in mind.

The Master: What was the question?

(Last question and answer read.)

Mr. Teal: That seems to have been answered.

Q. You are familiar with the cost of the Portland, Seattle & Spokane, are you not?

A. Yes, sir.

Q. I believe you testified in the Spokane case that that particular road would cost from $75,000 to $76,000 per mile?

A. Yes, sir.

Q. Is that correct?

A. Do you mean is that statement correct, or is that the actual cost?

Q. Is that statement correct?

A. I made the statement, yes, sir.

Q. Is that correct?

A. No, sir, I hardly think it was, because the cost was considerably more than that.

Q. About how much more?

A. Well, it has cost $100,000 a mile and over.

Q. You also testified in that case that that was a very expensive road, through rock work, and one of the best constructed roads on the Northern Pacific system, did you not?

A. One of the best constructed main lines.

Q. Yes. You also testified in that case, did you not, that the Portland & Seattle Railroad would cost probably two and a half times as much as the average of the main line?

A. Yes, sir.

Q. Is that true?

A. Yes, sir. When I made that statement I was talking about main line, not facilities.

Q. Yes, I understand. And that is true today, isn't it?

A. Yes, sir. Well, did I say two and a half times?

Q. That is what you said.

A. The average?

Q. I will read: "Leaving out all questions of terminals."

"Mr. Darling: The Portland & Seattle will cost probably two and a half times as much as the average of the main line."

Mr. Holden: What was the question to which that answer was given? Will you read that?

Mr. Teal: Yes, sir. I will have to read a little bit. He is examining upon this Portland & Seattle. (Reading.)

"Mr. Darling: That high average I had reference to was on the Portland & Seattle.

Mr. Stevens: That is an exceptional road in its construction, is it not, for a western road, at least?

Mr. Darling: It is a very heavy road.

Mr. Stevens: A very heavy grade. That is, I mean a very heavy amount of stuff to get the grades you were after.

Mr. Darling: It is a very heavy construction.

Mr. Stevens: Your purpose there is to make a very low grade, is it not?

Mr. Darling: Yes, sir.

Mr. Stevens: And therefore the original cost is very much greater than either the Northern Pacific or the Great Northern in their now condition?

Mr. Darling: Yes, sir.

Mr. Stevens: In what proportion would you say it would be greater?

Mr. Darling: Leaving out all questions of terminals?

Mr. Stevens: Yes, sir.

Mr. Darling: The Portland & Seattle will cost probably two and a half times as much as the average of the main line."

A. Well, now, that may be so. I would not be surprised if it did. When I made that statement I was talking about main line proper, not side track facilities and buildings. I would not like to make that as a definite statement now, but it is my impression it would cost close to that.

Q. Right at that time you were engaged in the construction, were you not?

A. Yes, sir.

Q. And they were passing under your observation?

A. Yes, sir.

Mr. Donnelly: Since that time you have practically completed the construction?

The Witness: Very closely, yes, sir. And since that time we have done a great deal of work on the main line of the

Northern Pacific, which has materially added to the cost of the Northern Pacific.

Q. In connection with this interest charge that you have allowed, is the only way a road could be built by the issuance of bonds and paying interest?

A. I don't think you could build a road by issuing bonds and paying interest.

Q. What other way would you get your money?

A. You would have to borrow it in some way, by notes, or stock. You might sell stock to build a road. You have to get your road built before you can bond it.

Q. When this road was completed, as figured out by you here, that would be, then, the actual cost of the reproduction of the entire system, would it not?

A. You mean this estimate of mine here?

Q. Yes.

A. Of April 12?

Q. Your last estimate.

A. Would be the total estimated cost of reproducing the Northern Pacific system?

Q. Yes. Is that right?

A. Yes, sir.

Q. But as I understand, not as a commercial proposition.

A. No, sir, not as a commercial proposition.

Q. What do you mean by the distincion between a commercial proposition and this statement?

A. This estimate is made on the basis of competing, or of reproducing the Northern Pacific system in twelve years, so as to get it through in the least possible time and serve the non-competitive points in the quickest possible time.

Q. And that is irrespective of any commercial conditions?

A. Yes, sir.

Q. You testified yesterday, as I remember, something about the Chicago, Milwaukee & Puget Sound road. Wasn't it three years ago today they commenced building that road?

A. They commenced real work in October, 1905.

Q. In October, 1905?

A. Yes, sir.

Q. From what point?

A. Well, from Seattle.

Q. I mean to what point—so we get the mileage.

A. To the Missouri river.

Q. The mileage?
A. 1350 miles, about.
Q. Are you familiar with its construction?
A. Portions of it.
Q. Do you know what it cost?
A. No, sir, I don't know what it cost.
Q. You don't know what it cost?
A. No, sir, because it is not completed yet.
Q. Well, I mean the through line.
A. You mean just the portion of the work that has been done.
Q. I say it is connected now.
A. Yes; the main line is done, but they have got no facilities; they have not got the track ballasted and in shape to operate.
Q. Your idea is they carry no freight over it.
A. They must be carrying freight over it. I think probably they are.
Q. But you don't pretend to know anything about their operating conditions, do you?
A. No, sir.
Q. Or what they are earning?
A. No, sir.
Q. Or what it cost?
A. No, sir.
Q. But it does run through substantially the same class of country that the Northern Pacific does from the Missouri River?
A. Yes, sir. That is, the same class of country, but not the same amount of settlement. It does not run through the same towns, and it does not reach the same industries. In fact, it has no industries on its line. It will take years to get them.
Q. When I was speaking of the country, I wasn't speaking of the cities. I say it runs geographically and physically through the same country?
A. Yes.
Q. It parallels your lines for hundreds of miles, in cases, doesn't it?
A. Yes, sir.
Q. Then you might just as well say so. Possibly its cost might throw some light upon what it would cost to reproduce a railroad, wouldn't it?

A. I think possibly it would. The unit prices they have paid would throw considerable light on the cost of reproduction.

Q. That is what I want to know. Now, then, upon the basis that you figure this estimate here, the questions of interest and the freight charges and the depreciation are extremely large items, are they not?

A. In this estimate?

Q. Yes.

A. Yes, sir.

Q. So that if the next estimate you made you raised to eight per cent., as you raised this one from four to six, it would increase the cost very much more, wouldn't it, on this same basis?

A. It certainly would, yes, sir.

Mr. Holden: Obviously.

Mr. Teal: That is obvious, yes.

Q. You testified in the Spokane case in 1898 that there was a very complete estimate made in connection with the properties of the Northern Pacific, didn't you?

A. I don't think I ever testified in 1898.

Q. I didn't say you testified in 1898. I said you testified in the Spokane case that in 1898 this estimate was made, was it?

A. There was a detailed estimate made of the grading.

Q. Of the grading?

A. Yes, sir.

Q. Now, in the Spokane case you started your estimate of cost of the Northern Pacific with that estimate of 1898?

A. I did, yes, sir.

Q. And you assumed that that was correct?

A. Yes, sir.

Q. At that time?

A. Yes, sir.

Q. And are we to understand from 1898 on that you have exact statements in the office covering these construction items?

A. No, sir, I don't think so. You mean exact cost on the books?

Q. Well, exact statements of what you have done.

A. I think I could tell the mileage that has been built and whatever lines we built; we have a record of them there in the office showing the quantities. I couldn't say as to cost.

Q. In making up this statement did you use the 1898 basis?

A. No, sir.

Q. What basis did you use this time?

A. I used the records in the office for everything except grading and ballasting, and that I used from the profiles.

Q. Why did you not use the 1898 estimate in this case?

A. Because I wanted to make an estimate of my own, complete.

Q. So that you testified in the Spokane case, did you not, that the estimate of 1898 was very complete?

A. Yes sir, at the time.

Q. And that it took a long time to make it?

A. Yes, sir.

Q. And of course it was much nearer the time that it was made, by 12 years, than an estimate made today for work done prior to 1898?

A. It was probably a nearer estimate of the amount of grading done for the condition that the road was in at that time than any estimate I could make now on the condition of the road at that time.

Q. But you did not take that estimate in this at all?

A. No, sir.

Q. Now, I would like to have you furnish the Court in this case the estimate of 1898 of the material or yardage it purported to show, and the basis you commenced with in this case, covering the same miles in each instance. You can furnish that, can you not?

A. Well, I think I can tell you right now.

Q. All right; let us have it.

A. Or very closely. My estimate in this case amounts to about 400,000 or 500,000 yards more than what I testified to in the Spokane rate case, except for work done since, which has been added to that estimate.

Q. Then you commence with 400,000 or 500,000 yards more?

A. Yes, sir; my estimate is that much higher; out of a total of 176 millions.

Q. You have a charge in here for clearing the road. I want to get at a few of these charges—in clearing the right-of-way.

Mr. Donnelly: Just a moment. You say out of a total of 176 millions.

The Witness: I think that was the estimate in the Spokane rate case; something like that. Very close.

Mr. Donnelly: Well, but the total cubic yards as shown in the present estimate.

The Witness: He asked for the basis on which this estimate was made.

Mr. Donnelly: The point I want to bring out is, Your present estimate is about 400,000 or 500,000 yards more out of a present total of 200,000,000 cubic yards?

The Witness: Yes, sir.

Q. Mr. Darling, taking your estimates on track laying and surfacing, items of that kind. Do you use the same basis now that you did in the Spokane case two years ago?

A. No, sir; I have increased the estimate somewhat.

Q. You have increased those estimates?

A. Somewhat.

Q. And on the matter of clearing, what did you do about that?

A. I think that is exactly the same.

Q. Exactly the same?

A. Yes, sir.

Q. Is it the same?

A. It is the same, yes, sir.

Q. How much do you figure that?

A. Clearing?

Q. Yes.

A. 23,032 acres, at $80 per acre; a total of $1,842,560.

Q. That is intended to cover the entire line, is it?

A. Yes, sir.

Q. Through the Dakotas?

A. Yes, sir.

Q. Montana?

A. Everywhere.

Q. And you think that that is a fair estimate?

A. Yes, sir.

Q. And you think it cost that much?

A. Yes, sir.

Q. How about the earthwork in the Spokane estimate and this estimate?

A. Earth in the Spokane rate estimate was figured at 28 cents per cubic yard.

Q. What is it figured in this estimate?

A. In this estimate it is 33 cents per cubic yard.

Q. Five cents a cubic yard more?

A. It is five cents in the statement, but it don't mean the same kind of earth.

Q. It doesn't mean the same kind of earth?

A. No, sir.

Q. What kind of earth does it mean in the Spokane case?

A. I have subdivided, in the Spokane case, everything outside of loose rock and solid rock into two classifications—one called hardpan, and the other earth. Now, hardpan is any class of material that cannot be reasonably plowed say with four horses. That would cover all earth, or all clay, cement, gravel, hardpan and material of that nature. Earth in this estimate would cover anything that can be easily plowed with four horses. Now, when this Spokane rate estimate was made I had no time to go away back into the books and get the information that I have gotten since. So, after going through all our books and getting 60,000,000 yards of quantity, as shown on that exhibit, I found that I could make a very much closer estimate by making one single classification of earth, instead of earth and hardpan, because our contracts were originally let in that way until within the last two or three years.

Q. So in this estimate you do what?

A. In this estimate I have one classification of earth covering everything outside of the loose rock and solid rock, which, of course, carries a higher price.

Q. And in the Spokane estimate you had hardpan separate?

A. Yes, sir.

Q. Would the Spokane estimate average up higher or lower than this present estimate?

A. I couldn't tell you without adding it up. It is not very far apart, I don't think.

Q. Doesn't it show right there?

A. Yes, sir.

Q. Well, let us see what it does show.

A. It shows approximately 116,000,000 yards of earth, at 28 cents, $32,500,000; hardpan, 38,703,637 cubic yards, at 42 cents, $16,255,528. Do you want the general average?

Q. Well, it might take a little longer. We probably can figure up the general average ourselves afterwards with that which appears there. Now, a very considerable part of your work on the Northern Pacific railroad has been let by contract, and that is the usual way of construction, is it not?

A. Yes, sir.

Q. And that is the way that the roads are built and paid for?

A. Generally, yes, sir.

Q. You have built, and are building today, a number of roads on the Northern Pacific railroad, haven't you?

A. Yes, sir.

Q. And you could furnish the exact statement of the cost of those roads, could you not?

A. I presume that could be furnished showing the cost to date.

Q. Yes. Well, you built a number of roads, by the president's report, during the last year or two?

A. Yes, sir. I presume they could all be furnished.

Q. Another thing I want to ask you: When a piece of road is laid out, or is intended to be built, by the management are you called upon for an estimate of the probable cost?

A. Yes, sir.

Q. And you do furnish estimates?

A. Yes, sir.

Q. And you have those estimates in your records?

A. Yes, sir.

Q. Can you recall any particular road that you have given estimates on say for the last two years?

A. Yes, sir.

Q. Will you please name a few in this section?

A. In Minnesota?

Q. Yes. Any place on the road. I don't care.

A. What is known as the Valley City change of line, a distance of approximately ten miles; the Lake Park to Glyndon change, about 24 miles; a new double-track line from Boseman to Muir tunnel, a distance of about 12 miles; complete change of line between Garrison and Missoula, for double-track line; a new line between St. Regis and Paradise, Montana; a new line between Belknap and Tosca, Montana. That is all I recall just now.

Q. On the day before yesterday, there was one line spoken of—I thought it ran south in the Dakotas some place—where securing the right of way was testified to by Mr. Cooper, where they ran through some farm.

The Master: It was in Montana, didn't he say?

Mr. Donnelly: He was speaking of the Bandman property. That was the Missoula and Garrison line change.

Mr. Teal: That was a condemnation proceeding. He spoke of another one down in Dakota, where they had to move the man's building.

The Witness: I think probably that Lake Park to Glyndon change of line. That is in Minnesota.

Mr. Teal: No, I thought it was a line about 60 or 60 miles long.

Mr. Donnelly: Have there been any changes at all, or any new lines constructed, in North Dakota, Mr. Darling?

The Witness: Nothing except the Valley City change of line.

Mr. Donnelly: The Valley City change of line?

The Witness: Yes, sir; and some grade revision work.

Q. But isn't there some road that is contemplated down through the Dakotas that the Northern Pacific is about to build, that they are securing the right-of-way for?

A. Oh, yes, sir.

Q. What is that road?

A. It might be a line from Mandan south, along the river.

Q. I think that is it. Now, how long is that road?

A. 17 miles.

Q. Is there any other line being built?

A. There is another line up the Canon Ball they are buying right-of-way on.

Q. How long is that?

A. 19 1/2 miles.

Q. You have furnished estimates on both of those roads, haven't you?

A. Yes, sir.

Q. I would like to have the estimates of the cost of construction that you prepared and introduced in evidence on all of these roads that you have mentioned. I only care for the total of your estimate as to the cost of construction.

A. The total cost of construction?

Q. Yes, sir. Your total estimated cost of construction of the roads that you have testified to, including these last two.

A. Yes, sir.

Q. And where the roads have been completed, I desire also to have filed the actual cost of construction, so we will see how near they are to the estimates.

A. I think you can get that better from the auditor or comptroller.

Q. Well, the counsel here represent the auditor and comptroller. I don't care where they get it from. I simply request that that be furnished by the complainants, as a matter of testimony in this case. In your estimate here as to the cost of construction in the handling of dirt and rock how much overhaul did you allow?

A. Well, that varies. That exhibit shows in part the overhaul. I think the overhaul on the system for that 60,000,000 yards amounted to about 1 3/4 cents a yard.

Q. About how much of a haul would that be?

A. My estimate, of course, is based on 600 feet free haul.

Q. 600 feet free haul?

A. Yes, sir. Anything over that is hauled generally at the rate of a cent a cubic yard per 100 feet.

Q. And you have the figures and tables upon which all this estimate is based, have you not?

A. Do you mean those exhibits?

Q. No. That must have required a very large amount of figuring?

A. Yes, sir.

Q. I say you have all the figures?

A. Yes, sir, everything is available.

Q. So that they are available for examination?

A. Yes, sir.

Q. I ask that because it will save time, because I would rather have it examined in that sort of a way. Another thing that I desire to ask you about, so as to be sure that I am correct in that—I may have forgotten it: As I understand your freight charge here in this last exhibit, covering both passengers and freight of all kinds, is based upon a haul to what you call the center of gravity of the system?

A. Yes, sir.

Q. A thousand miles?

A. Yes, sir

Q. In transporting men to work and contractors' materials and supplies, do you think, as an engineer, that is fair, Mr. Darling?

A. Why, I certainly do, because it is generally better to haul your stuff in by some other line than it is to haul it over your own line, when you are building anew.

Q. And do you count any back-haul on the passengers—on the men who work in this,—to carry them back home again?

A. No, sir; we don't carry them back home again.

Q. Did you figure that in here?

A. No, sir; except expert laborers. When we hire expert laborers there may be a condition attached that we shall pay their transportation out and return.

Q. Well, have you allowed for that in here?

A. Yes, sir.

Q. Have you allowed a thousand-mile back-haul on all the material of the contractors, too?

A. We have allowed the back-haul, such as it was, on contractors' plant, to whatever point they went. Our contracts provide that we shall furnish free transportation for all con-

tractors, men, tools, and plant, and return them, if they desire, a distance equal to that which they used in going out, or an equivalent distance—equivalent in money, I mean.

Q. And you have allowed for that in here—

A. Yes, sir.

Q. —as though they were taken back?

A. Yes, sir.

Q. Irrespective of whether it was, as a matter of fact?

A. No. We have allowed it exactly on what their transportation shows.

Q. Oh, that is accurate figures in here, is it?

A. Those exhibits here.

Q. I was speaking of in your statement here.

A. No, sir.

Q. Those are not exact figures?

A. No, sir.

Q. But I say in that statement is that basis of a thousand miles back-haul in here?

A. The basis of this statement is that the transportation charges run about what they do, and we get our knowledge from exhibits of that kind, and general knowledge of what actually goes out and comes back.

Q. I understood you to say that it is more economical and cheaper to pay some other line than to do the hauling yourself?

A. Generally, yes, sir.

Q. In your contracts, however, you prefer to do the hauling yourself?

A. Oh, yes.

Q. So therefore you do it in the highest priced way, is that correct?

A. That is the way we do it.

Q. And therefore you are paying more than you ought to?

A. Well, I don't know about that, whether we are paying more than we ought to or not. It depends upon whether there is any profit in that haul or not. They haul it out there to get what profit there is in it. I doubt very much whether there is any profit in it, except in the case of work away out at the further end of the line, and there is a long haul on laborers out there. Then there is probably profit in it; no question about profit in that. But you take the general average all the way through, I doubt if there is any profit in it.

Q. I don't want to be unfair to you. We may misunderstand each other. I understood you to say that it was cheaper

in the long run to pay some other line for transporting men and material—your contractors'—

A. Yes, sir. If you were to build the line across the country—

Q. —than to do it yourself?

Mr. Donnelly: Now, Mr. Teal, you do misunderstand him, if you don't understand him to say throughout that he is doing that in connection with the reproduction of that system. He is not speaking about adding a branch line to the Northern Pacific as it exists today.

Mr. Teal: I see. I have misunderstood him on that.

Q. Then, you remark applies to a system built as you propose to build this?

A. Yes, sir.

Mr. Donnelly: There is one additional sheet here, Mr. Teal, that ought to be added to Complainants' Exhibit 4, showing the mileage not included in the operated mileage statement of April 12, 1909. Just attach that to the end of Exhibit No. 4, so it will be the last sheet.

The Witness: It would properly belong between 1 and 2.

Mr. Donnelly: Well, in connection with that explanation there, that is the best place for it.

Q. Mr. Darling, last evening when you left the stand you stated you would ask whoever prepared the statement covering the equipment as to the method in which that was prepared.

A. I did.

Q. How was it prepared?

A. The cost of reproducing the equipment was prepared by the superintendent of motive power and machinery, and it was on the basis of reproducing that new.

Q. In other words, the numbers are not down here at all, as the number of locomotives and passenger train cars; but can you testify that this statement, of your own knowledge, is based solely on the actual equipment that you have?

A. No, sir. I say that estimate was provided by the superintendent of motive power and machinery, and I could not testify as to the accuracy of it.

Mr. Teal: I would like to give notice that we will want a witness upon that subject.

Mr. Donnelly: Now, Mr. Teal, you were asked specifically that question last night, and you said that all you wanted Mr. Darling to ascertain was as to whether or not depreciation had been allowed in the preparation of these items, and he

got that information. Of course, we are perfectly willing to supply you with the additional information if you want it.

Mr. Teal: Well, I do. And I would state now, that, while desiring to conduct this inquiry with the very best possible feeling, I trust that I will not be misunderstood if at various times in this I ask for things that may create a little trouble, because the information is not in my possession, but is in the possession of the complainants.

Mr. Donnelly: Oh, certainly. That is perfectly proper.

Mr. Teal: And I had understood that that would be done.

Q. But it was based upon the fact that the equipment would be new?

A. Yes, sir.

Q. Now, where is your equipment purchased—well, your locomotives are purchased by contract, of course?

A. Yes, sir.

Q. And you pay so much per locomotive, so much per passenger car, etc.?

A. Yes, sir.

Q. I notice an item here of one per cent for something on that—

A. For mechanical engineering.

Q. Mechanical engineering. What is that for?

A. That was for work done in getting up general designs of power and equipment, the cost of getting up the specifications for building the power and equipment, the cost of inspection, and the cost of all work out on the road in the way of making tests in order to get at the most economical designs.

Q. And that one per cent is not covered in this contingency of ten per cent, is it?

A. No, sir.

Q. That is in addition to any of the other percentages?

A. That is a percentage—you will find that that is shown as item 32. That is merely the details of item 32.

Q. This statement as to it all being new equipment applies to the floating equipment and miscellaneous equipment?

A. Yes, sir.

Q. Tools and everything that has been furnished you by the engineer?

A. Yes, sir.

Q. In the account of ballast here the item is on page 10, if you desire to look at it—it is something over $11,000,000?

A. Yes, sir.

Q. How much of that is freight charge?

A. I don't know whether those exhibits show or not. But it is merely the freight on men, tools and outfit.

Q. What did you say?

A. It is merely the freight on men, tools, and outfit.

Q. And there is a rent of equipment in there, too, isn't there?

A. It is what we call rent of equipment, yes, sir.

Q. That is included in this, isn't it?

A. What I call rent of equipment is repairs to equipment and repairs and renewal account.

Q. Now, as a matter of fact, when a road is ballasted, whether being constructed as this road or any other road, it is ballasted along from year to year and the ballast is gradually built up, isn't it, and you do the work on your own trains?

A. In order to get a first class railroad, that is the way it has got to be done.

Q. And you do that with your own trains, don't you, your own ballast trains and your own men?

A. Yes, sir, generally, except in new construction. If we were going to reconstruct this system we would probably have to let it all by contract.

Q. Yes; but you have taken twelve years to do that?

A. Yes, sir.

Q. Now, you say if you let it all by contract—let us take it that way—that the cost of this road would be the amount you put in?

A. I am afraid if you let the ballasting all to be done by contract it would cost much more. Of course we are figuring here on doing a lot of this work by company force after the work is turned over.

Q. I suppose so. You said the work was 12 years. Now, on tunnels (page 4) I note that you have added ten per cent to the contract price for extra excavation?

A. Yes, sir.

Q. That is, of course, in addition to the ten per cent that those contingencies cover, is it not?

A. This is not a contingency. This is an item that actually occurs. We let a contract for a tunnel, based on a certain price per lineal foot, for a certain section of tunnel. In order to take out that section, they have, of course, to work outside of that section, and they are liable to encounter slides, which they do. Now, that is based on actual knowledge that our overbreak in tunnels runs about ten per cent, and we

pay for that as extra excavation, for which we have a price, and that price is generally about $3 per yard.

Q. Irrespective of this statement here, as an expert, and with your actual knowledge of the situation, what do you say would be the cost of constructing roads, as they are constructed from time to time, as the system is built, compared with the figures that you have put in?

A. Do you mean the same kind of a road and the property that the Northern Pacific had?

Q. Yes; built as roads are built—not under this statement, now.

A. Well, I should say that this estimate would not provide money enough to reproduce the Northern Pacific system in the time in which I figured—twelve years.

Q. That is not the question. I say building railroads as they are built, and as you build them from time to time, and as you are building them today, and from your actual knowledge of the situation, is that estimate too high or too low as to what the road has actually cost, from your figures here?

A. Well, that estimate is not any higher than a road would actually cost built in the way that this has been built, including all facilities.

Mr. Teal: Please read the question.

(The last question was read.)

A. Well, it depends upon the degree of completion you mean. Oftentimes we build a branch line and only partially complete it. Now, those lines are built very cheaply. Oftentimes we build a main line and partially complete it. That can be built sometimes very cheaply. But when you begin to add your facilities, do the ballasting, and add the terminals and the necessary facilities, it brings the cost of the railroad up to just what that would be. In fact, a railroad never is built, never is completed. So that the cost of the railroad depends upon the degree of completion that you have reference to.

Mr. Holden: Those figures, Mr. Darling, contemplate bringing the Northern Pacific system to its present condition?

The Witness: Yes, sir.

Q. I would like, if I can, to get a direct answer to this question. Building railroads as you are building them and as you have built them from day to day, as commercial necessities require, and in the ordinary course of business, and as railroads are ordinarily built, is that estimate too high or too low on the question of construction?

A. There is nothing parallel to that.

Mr. Donnelly: Why don't you put the question in concrete form?

The Witness: I cannot conceive it.

Mr. Donnelly: If you mean has the actual cost of a railroad ever built by the Northern Pacific equaled the cost per mile as shown by that estimate—is that the information that you want to get?

Mr. Teal: Not altogether, because I think there are some miles that have cost that, but I don't think there are many. What I am trying to get from Mr. Darling, as an expert, is a statement in answer to what seems to me a very simple question. He has testified he has been familiar with and been doing railroad business here and railroad construction for 30 to 40 years, and has built roads all that time excepting one year. I ask him now, in the ordinary orderly development of systems of railroads with which he has been connected—roads that he has built and that he is now building—whether or not the cost of construction per mile in this estimate is higher than the cost ordinarily, or whether it is not.

A. Well, this is not an estimate of a railroad. It is an estimate of a system.

Q. Then, you decline to answer the question?

A. I can't. I don't understand it:

Mr. Holden: Why, no.

Mr. Teal: Well, let him answer it.

Mr. Holden: That puts the witness in a very unfair light.

Mr. Teal: I have asked it now in two or three different ways.

Mr. Holden: Ask the question in a way the witness can answer it.

The Witness: If you will give me the degree of completion of a railroad system that you have reference to, I will try to answer you, but I want to know the degree of completion.

Q. Well, we will take the Northern Pacific Railroad, built as it has been built, I will say, so as to bring it down to date, in the last ten or twelve years, since its re-organization,—whether its main and branch lines and sidings have actually cost as much to construct, as that estimate. I mean now actual cost.

A. Yes, sir, I think they have.

Q. You think they have?

A. Yes, sir.

Q. And, of course, since the reorganization your books will show your cost?

A. I am not so sure about that. The comptroller can tes tify to that better than I can.

Q. At any rate, you believe they have cost that much?

A. Yes, sir.

By Mr. Wimbish:

Q. I want to ask just a few questions. Mr. Darling, are you acquainted with the Canadian Pacific system?

A. I have been over portions of it.

Q. How does it compare physically with the Northern Pacific system—I mean as to cost of construction, or reproduction?

A. Well, from what I know of the Canadian Pacific—I have not been over it for two or three years—I should say that the capacity of the Northern Pacific is very much greater than that of the Canadian Pacific, or, in fact, of any other railroad that I know of.

Q. That is not exactly what I want, Mr. Darling. We will take the main line of the Canadian Pacific, say, and the main line, the through line, of the Northern Pacific. Consider the physical difficulties encountered in construction or reconstruction of the road, how do they compare?

A. Well, from my impression I should say that the construction from Winnipeg to the Coast, of the Canadian Pacific would cost for the main line, without taking into consideration facilities or terminals,—I should think it would cost nearly what the Northern Pacific would.

Q. Do you not think it would cost more?

A. I don't think so; because from Winnipeg to the foot of the mountains they have a very cheap class of construction—much cheaper than anything we have; but from the foot of the mountains west to Vancouver their construction is very expensive. It is pretty hard work to compare two railroads that are 1800 miles long, without giving it considerable thought.

Q. I only want your opinion in a general way, Mr. Darling. Of course I know you have made no estimates on the Canadian Pacific, and I do not expect any such detail in your answer; but generally I want to compare the Northern Pacific system with the Canadian Pacific system.

A. When I answered your question I was merely comparing one line of railroad right through—not facilities, because I don't know anything about the Canadian Pacific facilities.

Q. What do you figure would be the re-construction cost of the Northern Pacific system, eliminating the terminals in the principal cities, say St. Paul, Minneapolis, Duluth, Seattle, Tacoma, and Portland?

A. That runs about $80,000 a mile.
Q. About $80,000 a mile.
A. Yes, sir.
Q. Have you any definite idea of the value of the Canadian Pacific system, eliminating its principal terminals?
A. No, sir.
Q. Are you familiar with the lines of the Pennsylvania Railroad east of Pittsburg?
A. I have been over them. I am not familiar with their cost of reproduction or anything of that kind.
Q. You know the general character of the road?
A. Yes, sir.
Q. And of the country?
A. Yes, sir.
Q. How would you say that those lines compare in value with the lines of the Northern Pacific?
A. That would be very hard—I couldn't answer you at all.
Q. Would you say they were greater, or less?
A. Do you mean per mile of single track? Some of those lines are four-track.
Q. No; I am taking the lines east of Pittsburg, without regard to their expensive terminals, because we all understand that is a very varying quantity; but I want to get, if I can, your view of the comparative value of the lines of the Pennsylvania east of Pittsburg, as a railroad system and as compared with those of the Northern Pacific.
A. I could not answer that question. I could not give you any comparison, although I have been over that line a great many times, yet I never have been on the hind end very much to see the character of the counrty and see the character of the construction.
Q. How do the lines of the Pennsylvania west of Pittsburg compare with the Northern Pacific system—always eliminating terminals?
A. I could not tell you that. I wouldn't like to answer that question, because I don't know. I don't know enough about that.
Q. Are you familiar with the lines of the New York Central?
A. I am more familiar with the lines of the Lake Shore from Chicago east, than with the New York Central. But those lines were originally very cheap lines. They are along the lake shore, and it is very easy material to handle, and a very small amount of yardage involved.
Q. Mr. Darling, how would you say that the lines of the

New York Central from Buffalo to New York City would compare in value with the lines of the Northern Pacific?

A. Compare in value?

Q. Yes; or the cost of construction, or re-construction, whichever you choose to make it.

A. That is a pretty hard thing to say. I should say it would cost very much less than the Northern Pacific, the way I remember it; but I wouldn't want to go on record as to that at all.

Q. Have you any idea what it would cost to reproduce the New York Central, including its New York terminals?

A. No, sir, I have not. I imagine it would be enormous, though.

Q. Don't you know it would be enromous?

A. I think it would, yes.

Q. Don't you think it would be practically impossible?

A. You could not re-produce the New York terminals.

Q. You could not reproduce them at all?

A. I don't think so.

Q. How about the Pennsylvania? Don't you think it would go up enormously high if you tried to reproduce the Pennsylvania system east of Pittsburg?

A. Why, it certainly would.

Q. In other words, Mr. Darling, do you think that a hypothetical (using that word) estimate of the cost of reconstruction, made up in the way you have made that statement, reflects in any fair way the value of a road?

A. I don't think it reflects the value of the road at all. This is merely the cost of reproducing some physical things.

By Mr. Dillard:

Q. If it is an old established road, with a good-will and a good business, its value would be more than the value of the physical properties, would it not, Mr. Darling?

A. Not only that; but the value of the road itself today on the Northern Pacific is far greater than that would represent. You could not make it in twelve years in the condition that it is today, to do the business it is doing and in the time that it is doing it.

Q. Time adds even to the physical properties a certain value which nothing else can give to it, does it not?

A. Yes, sir; it would be impossible to run fast passenger trains over the Northern Pacific after twelve years of construction, as compared with the way they run them today.

By Mr. Walter:

Q. Mr. Darling, how long ago did you begin the preparation of this table?

A. This table here?

Q. Yes, sir.

A. This table I have been compiling for the last two years, from the time the Spokane rate case began.

Q. During that time how many different persons have been engaged with you in the preparation of it?

A. I could not say how many, but a great many.

Q. And you conferred with each other often during the course of the preparation?

A. Yes, sir.

Q. And you have compared figures?

A. Yes, sir.

Q. And you changed them from time to time?

A. Yes, sir.

Q. That applies as to practically every item there?

A. Why, more or less it does. I couldn't say it does to every item.

Q. And it is true that the items are, as a rule, much larger than when they were first made—the totals?

A. Well, take from item 3 to 32, inclusive. I don't think there is hardly any difference.

Mr. Donnelly: Some of them are in fact lower, aren't they?

The Witness: Some of them are a little lower. We found some errors. Take, for instance, locomotives: we found an error of $3,000,000. That was reduced $3,000,000.

Q. Can you give me any other items in there that you have reduced in any appreciable amount in the last two years?

A. No, sir, I think not. I don't know of any that have been reduced.

Q. Most of them have been increased rather than decreased?

A. Increased by the additional work we have done since; but there have been no—

Q. And the purpose of the additional work was to get additional amounts to add to these various items?

Mr. Donnelly: No; he means the additional construction work, Mr. Walter.

Mr. Walter: Well, he can explain that.

The Witness: Well, the additions to these estimates were due to the work done since 1906 and 1907, of which there has been a great many million dollars worth.

Q. Do you want to be understand as saying that the items you have embraced from 3 to 33 (excluding 33) that those

items have been increased only by the amounts actually expended in the past two years?

A. Very little if any more.

Q. Haven't you discovered much additional data from which to compile these figures?

A. We have found a great deal of data in order to compile exhibits, and have done a great deal of work in getting up and checking over the item of grading, clearing and grubbing; but outside of that, the amount of work done is very little, because the rest of it is a matter of record. We have them on our books, and we know just what we have got.

Q. These various items—of how many of them did you personally prepare the detail from your original record?

A. I don't think there is a single one that I have personally prepared, taken all the figures and done all the work in connection with it. I don't think there is a single one of them that I personally prepared.

Q. They have all been more or less prepared by parties other than yourself?

A. Under my direction, yes, sir.

Q. And it was all done from the original—that is, from the beginning of the Spokane case, it was begun with the purpose of showing that your rates did not give you the revenue you were entitled to?

A. I presume that is what the case was being tried for.

Q. Yes.

A. This estimate had nothing to do with the rate case. As far as I am concerned, this estimate is the cost of reproducing this property, regardless of any case.

Q. Of course you understand that the more valuable and the greater sum it cost to reproduce, the greater revenue you might perhaps be entitled to charge?

A. Possibly.

Q. And it was with a view to establishing the contentions of your company that these various items were prepared?

A. Well, that is perhaps what the counsel wanted it for, but my estimates had nothing to do with that.

Q. During that time how many different departments have worked on this table?

A. The superintendent of telegraph—

Q. Well, in short, practically all, haven't they?

A. No, sir.

Q. What ones have not contributed in anywise to that?

Mr. Dillard: Let him tell what has. Maybe he can do better by that.

Mr. Walter: I thought exclusion might be the shorter.

The Witness: For instance, I don't think the legal department has done anything on this.

Q. They have had nothing whatever to do with it?

A. No, sir.

Q. And the expense of the legal department and its operation has not in anywise contributed?

A. Not that I know of.

Q. You haven't had in mind the reproduction of your legal department at all?

A. No, sir.

Mr. Holden: That would be impossible.

Q. Aside from the legal department, practically every department has contributed its share to the table you have offered in evidence?

A. By consultation, yes.

Q. So far as you are concerned, of your own personal knowledge, and speaking absolutely, you have only the faintest idea as to the correctness of the detail from which this table was made?

A. Well, I have a very full idea, because after a piece of work is completed a man always has checks to see whether it is in reason or not, or to see whether it is anywhere near correct.

Q. All you are speaking about now is to see whether the joints all connect up properly or not?

A. No, sir. For instance, here is item 3—one of the largest items we have got—grading, clearing and grubbing. You take the number of cubic yards of material that is included in that mileage, divide it by the number of miles, and you get at the total number of cubic yards per mile. Now, that gives you a very close idea of the yardage in the system; and I know from personal experience about how much a certain line will run per mile.

Q. Now, that is your judgment?

A. Yes, sir, that is my judgment.

Q. You don't know the detailed facts from which these figures were made so that you can say of your own knowledge that they are absolutely correct?

A. No, sir, I do not. I know nothing except each one of these parties was given certain work to do, and they were checked by certain other parties. Beyond that I don't know anything about it, so far as the details are concerned.

By Mr. Dillard:

Q. Mr. Darling, when you build a railroad, as chief engi-

neer you don't know the reading of every compass every time every Jacob's staff is erected, do you?

A. No, sir, I don't know anything about it.

Q. You don't know every tangent that is put in?

A. No, sir.

Q. And yet you do know what that work has cost, or will cost, so as to make your estimates on it?

A. Yes, sir. Sometimes I fall down awfully; but I try to.

By Mr. Donnelly:

Q. The information contained in that statement, Mr. Darling, is all drawn from the right-of-way department and the engineering department, is it not—the first statement there as to the cost of the right-of-way?

A. Yes, sir.

Q. And the rest of it is all from the engineering department?

A. No, sir.

Q. What items are there that are not?

A. Those having anything to do with the equipment and the motive power are from the superintendent of motive power and machinery; anything having to do with the telegraph and telephone is from the telegraph department.

Q. And they are distinct from the engineering department?

A. Yes, sir.

Q. And what other items are there?

A. The rest we get from our own records.

Q. Now, in order to get the theory upon which this estimate has been made fully in the mind of the Master, Mr. Darling: you have assumed, as I understand you, in starting the preparation of this estimate, that you were here in St. Paul without a particle of road built, without a particle of right-of-way or terminal grounds anywhere, and with the problem placed before you of reproducing that Northern Pacific railroad as it is shown on that map—not a particle of work of any kind having been done?

A. That is correct.

Q. That is correct, is it?

A. Yes.

Q. And that you are to reproduce it in the quickest time in which it can economically be reproduced?

A. Yes, sir.

Q. You don't contemplate actually earning money on it as you go along—

A. No, sir.

Q. —except in so far as you are operating the property. The problem is to reproduce it in the quickest time in which it can economically be reproduced?

A. Yes, sir.

Q. And that time you figure is 12 years?

A. Yes, sir.

Q. Now, of course, you are not a financier?

A. No, sir, I am sorry to say.

Q. You are an engineer. The question as to the rate of interest that would be charged upon the money that would go into the property is a question, of course, upon which you simply assumed this rate of interest?

A. Yes, sir.

Q. That is not an engineering question?

A. No, sir.

Q. Now, on the question of the payment of freight on material hauled; what has been the actual experience in the construction of these trans-continental lines, Mr. Darling, as to whether the freight or the material has as a rule, been carried over other lines than the lines actually in course of construction?

A. The only roads that I know of that can be at all compared to a system like this are the Great Northern and the Puget Sound road which has recently been constructed. Those roads had to be constructed like all other roads have to be constructed—all other large roads—by the aid of some other road. The Great Northern used the Northern Pacific for its construction; the Milwaukee or Puget Sound road used the Northern Pacific and the Union Pacific for its construction.

Q. Take the Milwaukee as an example. Do you know to what points on the Northern Pacific the material used in the construction of that road was hauled?

A. Yes, sir.

Q. Just give them to the master.

A. Their method of construction was to begin track laying, ballasting, putting in their facilities from different points. They began at the Missouri river and worked west, using their own line. They started another construction outfit at Terry, where they first struck the Northern Pacific line, and they hauled in the material and worked both ways from Terry.

Q. Hauled it in over the Northern Pacific?

A. Yes, sir. And then they intersected the Northern Pacific again at Lombard. They put in outfits there and worked each way from Lombard. They did the same way at Butte;

they hauled material into Butte over the Northern Pacific and over the Union Pacific. They did the same thing at Houston, a station just west of Missoula. They brought in a great amount of material there and worked east and west from Houston, laid their track and ballasted it and brought in their ties and other construction material. They used the Northern Pacific all the way from St. Regis, where they leave the Missouri river to go over the mountains—they used the Northern Pacific clear up to a place called Taft, brought in all the material that way for construction, over the mountains—or, rather, over the east side of the mountains. On the west side of the mountains they used the Union Pacific, coming in on one of the branch lines of the Palouse country. Material was brought in that way. They worked each way from there for the steel bridges, for the track and for the ties. And they put in a material yard at Lind, and worked each way from Lind, Washington. They did the same thing at a point called Thorpe, just west of Ellensburg; worked each way from there. And then other material was brought in to Seattle and Tacoma and they did some of the work from there.

Q. Now, for a road actually under construction, isn't it cheaper, as a rule, to have the material hauled over another line than it is to haul it over the line in course of construction, in view of the derangement of the construction work?

A. You have got to do that in order to expedite the work and make it more economical. Take, for instance, the Northern Pacific: they had to do their work, a great portion of it, from Dillon—or not exactly from Dillon, but a point farther north than Dillon—it is the northerly end of the Utah Northern, anyway. The material was brought in there and they worked each way from there.

Q. That is to say, in the construction of the Northern Pacific—

A. Yes, sir.

Q. —the Union Pacific lines were actually utilized in getting material there?

A. Yes, sir; and the O. R. & N. used it from the west end, working up this way, toward the east.

Q. Now, Mr. Teal has spoken about the cost of construction of the Milwaukee road—that is, the Coast extension of that line. What difference is there between the Milwaukee road, or the Coast extension of it at the present time, and the Northern Pacific? Is the Milwaukee Coast extension as it stands to-day as good a railroad as the Northern Pacific is?

A. Merely its foundation. They have got a good foundation to begin a railroad on. They have got their line laid and graded and track on and some ballast on, but it can never be in the condition that the Northern Pacific is until a certain amount of time has elapsed.

Q. In what respects is it inferior now as to ballasting and as to the appurtenances and things of that kind?

A. It hasn't the facilities in the first place. That has got to grow up with the line. Then, the road-bed is not settled, the ballast is not in shape and cannot be made in shape; the slopes of the excavations and of the embankments are not in the shape the Northern Pacific are, and cannot be until a certain time has elapsed. In other words, they could not begin to operate fast trains similar to those operated by the Northern Pacific, and probably cannot for several years.

Q. The Spokane, Portland & Seattle, I think you have said, has cost in excess of $100,000 a mile?

A. That is my impression, yes.

Q. Is that road as it stands to-day in as good condition as the Northern Pacific main line from here to the Coast?

A. No, sir. But of course there is one thing to say about that road. A great portion of it is through rock, and it does not require the settlement and time that other roads may need.

Q. But in this actual cost of that road, that you have spoken of no allowance at all has been made for interest on the money that has been expended in constructing it?

A. No, sir; none whatever. There has been no interest allowed in this estimate for anything under construction.

Q. Assuming that you would start to reproduce the Northern Pacific system on the plan that you have spoken of—that is, getting through the construction work just as rapidly as you could—is it likely, in your judgment, that any considerable portion of that line would be earning returns in excess of the cost of operation of it?

A. No, sir, I think not.

By Mr. Teal:

Q. Just one or two questions. Didn't you speak of a line that you could furnish figures on—a line change from Muskoda to Glyndon?

A. Yes, sir.

Q. How far is that?

A. How far is that from here?

Q. No, how long.

A. About 24 miles, I believe.

Q. Did you meet any unusual difficulties in the construction of that line?

A. Yes, sir.

Q. Quicksand and stuff of that kind, didn't you?

A. Yes, sir.

Q. It made the cost run up very much, didn't it?

A. Yes, sir.

Q. You wouldn't call that an average line change?

A. I wouldn't call that an average piece of line under any condition.

Q. That is what I mean. Now, you speak of the Great Northern being a road somewhat similar to the Northern Pacific in building. What roads did you say hauled the material to the Great Northern in the course of its construction?

A. I don't know about the track, but for the men, tools and material that went out there I would say the Northern Pacific hauled the greater part of it.

Q. You are familiar with the construction of the Union Pacific and Central Pacific?

A. No. sir; only by reading.

Q. Well, I mean as an engineer you are?

A. Yes, sir.

Q. You, of course, know when they were constructing there were no railroads across the country?

A. Yes, sir.

Q. And how did they get their material to the front?

A. They freighted it entirely.

Mr. Holden: What do you mean by "freighted it"?

A. By team—men, tools, outfit, and plant.

Q. You think, then, the original cost of construction of that road would be a great deal more than the Northern Pacific?

A. Yes, sir; I do, for equal pieces of work.

Q. Yes, I mean taking the original cost of the Union Pacific and the original cost of the Central Pacific.

A. Yes, sir. I mean to say that the unit prices for grading or for anything of that kind, anything that goes to make up a railroad, would be more than it would be on the Northern Pacific.

Q. I don't suppose you know what the original cost of the Great Northern was, do you?

A. No, sir.

Q. Do you remember whether Col. Clough testified in a case as to the original cost of the Northern Pacific?

A. No, sir; I don't know.

Q. I mean the Great Northern.
A. I don't know, sir.
Q. Col. Clough is considered a skillful engineer, isn't he?
A. Yes, sir.
Col. Clough: I am not an engineer.
The Witness: He means somebody else—another Col. Clough.
Col. Clough: It must be.
Mr. Teal: Col. Clough testified in the Great Northern as to the original cost.
Col. Clough: I don't think so. That is a mistake.
By Mr. Walter:
Q. At the end of the year 5 you would have the main line in operation for the benefit of traffic from St. Paul to Fargo, from St. Paul to Duluth, and Duluth to Staples—573 miles?
A. In temporary condition, yes, sir.
Q. So as to operate traffic?
A. Yes, sir.
Q. Now, do you want to let your testimony stand that for the next seven years the cost of operating over that line of track would be greater than the revenue you would get from the freight you hauled?
A. I think so, yes, sir.
Q. And you are just as certain of that as you are of the rest of your testimony?
A. Exactly; so far as credit for transportation is concerned.
Q. And in none of your tables do you take account of a single dollar of revenue received by the company for hauling freight?
A. No, sir.
By the Master:
Q. Mr. Darling, I don't quite understand the basis of this interest charge, this charge of $164,000,000 interest. Upon what sum is that charged and for what period?
A. That is shown very much in detail on the last sheet of that exhibit.
Mr. Walter: What page is it?
Mr. Donnelly: Page 34.
By Mr. Teal:
Q. In connection with that, under your theory you purchase all of your terminals?
A. Yes, sir.
Q. And receive no income for twelve years?
A. No, sir.

Q. And pay six per cent. interest all the time?
A. Yes. sir.
Mr. Donnelly: Are all the terminals included there in the first three years?
The Witness: The principal terminals; yes, sir.
Q. What we are speaking of as terminals are St. Paul, Duluth?
A. Yes, and even Spokane.
Q. And Seattle?
A. The principal terminals.
Q. The things we have always been speaking of as the principal terminals?
A. They are all shown there on that sheet.
The Master: Does this show the period for which the interest is charged?
The Witness: Yes, sir.
(A recess was here taken until 2 o'clock P. M.)

CHARLES HAYDEN, being duly sworn as a witness on behalf of the complainants, testified as follows:

Direct Examination.

By Mr. Holden:
Q. Mr. Hayden, you are connected with the Great Northern Railway Company?
A. Yes, sir.
Q. In what capacity?
A. I am now assistant right of way commissioner.
Q. How long have you been engaged in railroad work?
A. In railroad work about 32 years.
Q. Will you state briefly the nature and extent of your railroad work during that period?
A. I started out as rodman in engineering work, with the Green Bay & Minnesota Road in Wisconsin. I was afterwards with the Madera and Mamore Railroad in Brazil, South America, as assistant engineer on location and construction. Later I was with the Pennsylvania Railroad as assistant engineer of right of way at Blairsville; I was with that company for about seven years, up to the time I came west. I was with the Union Pacific for a short time in the construction department, engineering department. I then came with the St. Paul,

Minneapolis & Manitoba Railway Company, in 1887, and have been with the company constantly ever since, in the right of way department, with the exception of the year 1890, when I was in California on railroad surveys, returning to this company in 1891.

Q. The St. Paul, Minneapolis & Manitoba is the predecessor company of the Great Northern?

A. Yes, sir.

Q. How many years, then, have you been connected with the Great Northern property?

A. About 22 years, with the exception of 1890.

Q. And during that period have you been largely connected with the right of way and land department?

A. Altogether, yes, sir.

Q. Will you state briefly the nature of your work in that connection?

A. I entered the right of way department as chief clerk in 1887 and held that position until 1894, when I was made assistant right of way and tax commissioner. In 1903, in January, I was made right of way and tax commissioner of the company, which position I held until December 31, 1906, when I was made assistant commisssioner and the department somewhat changed.

Q. State what the character of your work has been in connection with right of way matters.

A. In connection with right of way work I have had practically everything that is to be done in the department—the keeping of records, the platting of deeds, the securing of contracts in the field, the direction of field agents in securing contracts and deeds, negotiating purchases of right of way and terminals, station grounds; in fact everything that has to be done in the department in connection with right of way work.

Q. And has that experience extended over all portions, substantially, of the Great Northern system?

A. Practically all of it; yes, sir.

Q. And have you had to do not only with the acquiring of new portion of right of way and also with the acquiring of additional right of way to the present lands owned, for enlargements and things of that kind?

A. Yes, sir.

Q. And has your work led you into transactions in land both in the country, in the different states, as well as in the towns and villages and the larger cities where the system lies?

A. Yes, sir, it has.

Q. Can you give some idea in round figures of the amount of property that you have had to do with in purchasing for the company, in recent years for instance?

A. I have never made any tabulated statement of the area or the consideration paid, but since I have been with the company, since 1887, the road has increased probably five thousand miles of main line, and I would say, roughly, in that time it acquired a hundred thousand acres of right of way and station grounds, at a cost of between eight and ten million dollars. That would be just the rough figures, Mr. Holden.

Q. I want simply something to indicate the nature and extent of your experience. From what you have stated to us, are you able to say whether you have an opinion as to whether you are familiar with the present values of the right of way and station grounds of this system; or, putting it differently, have you such a knowledge of values as would enable you to make an estimate of what it would cost to reproduce those lines throughout the system?

A. I have, yes, sir.

Q. Have you prepared such a statement at the request of the counsel in this case?

A. I have.

Q. I wish you would produce it and we will have it marked Complainants' Exhibit 11 (Hayden).

A document was produced by the witness and so marked.

COMPLAINANT'S EXHIBIT 11 (HAYDEN).

GREAT NORTHERN RAILWAY
(SYSTEM)
GENERAL SUMMARY.

RIGHT OF WAY, STATION GROUNDS AND TERMINALS ON LINES IN OPERATION.

Location.	Miles.	Right of Way and Station Grounds outside of Terminals.	Value of Terminals.	Total Value.
Wisconsin	32.19	$ 84,253	$ 1,275,265	$ 1,359,518
Minnesota	2,056.07	7,100,379	23,535,542	30,635,921
North Dakota	1,544.53	8,376,664	1,912,220	10,288,884
South Dakota	262.36	1,389,336	.....	1,389,336
Iowa	77.86	319,200	1,681,544	2,000,744
Montana	1,368.65	3,273,402	1,784,878	5,058,280
Idaho	106.03	205,000	.....	205,000
Washington	814.86	3,105,328	30,255,110	33,360,438
Manitoba	161.71	358,903	.....	358,903
British Columbia	336.40	877,020	2,291,700	3,168,720
Total	6,760.66	$25,089,485	$62,736,259	$87,825,744

TERMINALS ON LINES IN OPERATION.

Location.	Acres.	Average Value per Acre.	Value Property.
St. Paul	354.12	$22,709	$ 8,041,686
Minneapolis	401.59	36,168	14,524,704
Duluth	27.19	35,644	969,152
Superior	686.40	1,858	1,275,265
Grand Forks	131.41	7,000	919,870
Devil's Lake	276.15	2,000	552,300
Minot	88.01	5,000	440,050
Sioux City	216.46	7,768	1,681,544
Great Falls	620.85	706	438,367
Helena	258.75	1,343	346,511
Butte	72.00	13,889	1,000,000
Spokane	315.68	11,879	3,750,000
Anacortes	25.00	4,000	100,000
Everett	250.00	6,000	1,500,000
Bellingham	108.00	7,639	825,000
Seattle	375.41	64,144	24,080,110
Vancouver	110.25	20,786	2,291,700
Total	4,317.27	$ 14,531	$62,736,259

TERMINALS ON LINES UNDER CONSTRUCTION.

Location.	Acres.	Average Value per Acre.	Value Property.
Winnipeg	259.32	4,563.61	$ 1,183,436
Tacoma	17.00	20,000.00	340,000
Total	276.32		$ 1,523,436

GREAT NORTHERN INTEREST IN OTHER TERMINAL COMPANIES.

St. Paul—Minnesota Transfer Ry. Co., G. N. 1/10	$ 575,619
St. Paul—St. Paul Union Depot Co., G. N., 1/9	610,572
Superior—Lake Superior Terminal & Transfer Ry. Co., of Wis., G. N., 1/3	116,725
Total	$1,302,916

RECAPITULATION.

RIGHT OF WAY AND STATION GROUNDS ON LINES IN OPERATION, EXCLUSIVE OF TERMINALS, SHOWN ON PRECEDING SHEET NO. 2, BUT INCLUDING RIGHT OF WAY AND STATION GROUNDS IN 370 VILLAGES, TOWNS AND CITIES OF OVER 200 INHABITANTS EACH.

Location.	Miles.	Av. Rate per Mi.	Acres.	Av. Rate per Acre.	Amount.	Page. No.
Wisconsin	26.79	$3,146	520.63	$162	$ 84,253	4
Minnesota	2,029.44	3,498	35,273.42	201	7,100,379	5, 6
North Dakota	1,532.73	5,465	27,836.75	301	8,376,664	7
South Dakota	262.36	5,297	4,355.00	319	1,389,336	8
Iowa	76.58	4,168	1,064.00	300	319,200	9
Montana	1,342.47	2,438	31,600.74	104	3,273,402	10
Idaho	106.03	1,933	2,050.00	100	205,000	11
Washington	771.13	4,026	14,771.96	210	3,105,328	12
Manitoba	161.71	2,219	2,514.00	143	358,903	13
British Columbia	333.40	2,631	4,974.44	176	877,020	14
Totals	6,642.64	$3,777	124,960.94	$201	$25,089,485	

ON LINES UNDER CONSTRUCTION.

Minnesota	743.65	$31.34	23,206.87
Montana	1,767.92	44.61	78,866.00
Washington	621.06	70.53	43,804.61
British Columbia	1,077.80	104.64	112,778.87
Total	4,210.43	61.43	258,656.35

WISCONSIN.

Location.	Acres.	Average Rate per Acre.	Total Value.
Foxboro to S. Limits Superior	321.90	$ 200.00	$ 64,380
Boyleston to State Line	198.73	100.00	19,873
	520.63	162.00	84,253
Superior Terminals	357.68	$2,000.00	$ 715,360
West Superior, Und. ½ 321.45	160.72	347.83	55,905
Bay Front	168.00	3,000.00	504,000
	686.40	$1,857.90	$1,275,265
Total in State			$1,359,516

MINNESOTA.

RIGHT OF WAY OUTSIDE OF TERMINALS AT ST. PAUL, MINNEAPOLIS AND DULUTH.

	Location.	Acres.	Average Value per Acre.	Amount.
4.	City Limits Mpls. at Cedar Lake to State Line at Breckenridge	4,041.13	$304.50	$1,230,542
5.	Hopkins Spur	37.53	300.00	11,259
6.	Old Spring Park Jct. to Hutchinson	645.86	360.78	233,018
7.	W. & S. F. Jct. to Jasper (State Line)	2,288.37	217.57	497,885
8.	Old Sioux City & Northern in Minn	194.91	243.56	47,472
9.	Benson Jct. to Nassau (State Line)	686.92	206.21	141,663
10.	Morris Jct. to Brown's Valley	913.07	198.50	181,243
11.	Yarmouth Jct. to Childs	137.55	120.00	16,505
12.	Northtown Jct. to Sauk Rapids	484.75	223.20	108,198
13.	Elk River to Milaca Jct	435.93	123.40	53,793
14.	East St. Cloud to Hinckley	981.93	153.59	150,818
15.	Clearwater Jct. to St. Cloud, including Spur to Dam	839.98	299.41	251,497

	Location.	Acres.	Average Value per Acre.	Amount.
16.	Willmar Jct. to St. Cloud (W. End)	906.12	$ 223.61	$ 202,625
17.	E. St. Cloud (E. Switch) to Barnesville, (E. Hd. Block)	3,125.59	277.55	867,500
18.	Sauk Center Jct. to Park Rapids (1,000' W. of Depot)	1,513.17	164.85	249,451
19.	Park Rapids to Cass Lake	804.48	96.66	77,758
20.	Evansville Jct. to Tintah	504.39	150.00	75,658
21.	Fergus Falls Jct. to Pelican Rapids	316.75	205.01	64,938
22.	Moorhead to Brushvale (State Line)	494.45	175.43	86,739
23.	Barnesville N. to Moorhead	339.71	312.10	106,044
24.	Barnesville E. to Noyes and St. Vincent	3,791.09	253.22	959,965
25.	Moorhead to Carman Jct	919.09	172.90	158,913
26.	Crookston Jct. to East Grand Forks (State Line)	366.32	356.83	130,713
27.	Ives (end of track), to St. Hilaire	236.20	84.33	19,920
28.	Red Lake Falls Jct. to Thief River Falls.	308.86	256.92	79,352
29.	Thief River Falls to Greenbush	828.44	61.43	50,894
30.	Carman Jct. to Fosston	1,078.31	128.05	138,083
31.	Coon Creek to Hinckley	996.68	176.09	175,508
32.	Sandstone Spur	39.63	74.94	2,972
33.	Hinckley to Foxboro	840.75	189.95	159,703
35.	State Line to Cloquet (1,970' E. of Depot)	299.93	122.33	36,842
36.	Cloquet to Deer River	1,456.14	123.89	180,410
37.	Brookston to Ellis	732.88	30.00	21,987
38.	Mississippi to Dewey Lake	794.24	144.95	115,126
39.	Chisholm to Virginia	294.80	154.47	45,538
40.	Kelly Lake to Flanders (via Emmert)	157.69	35.70	5,629
41.	Mining Spur	405.18	90.00	36,466
42.	Deer River to Fosston	1,668.87	71.29	118,974
46.	Kelly Lake to Fermoy	365.73	24.00	8,778
	Total	35,273.42	$201.29	$7,100,379

The above figures include station grounds and yards at all stations except St. Paul, Minneapolis and Duluth.

TERMINALS.

Location.	Acres.	Average Value per Acre.	Amount.
St. Paul	354.12	$22,709.00	$ 8,041,686
Minneapolis	401.59	36,168.00	14,524,704
Duluth	27.19	35,644.00	969,152
Total			$ 23,535,542
Total in State			$ 30,635,921

NORTH DAKOTA.

Location.	Acres.	Av. Value per Acre.	Amount.
Fargo to International Boundary	3,052.60	$432.00	$1,318,723.00
Grand Forks to Minot	5,364.76	317.55	1,703,604.00
Minot to Montana State Line	2,374.94	350.00	831,229.00
Grafton to Walhalla	693.16	350.00	242,606.00
Lakota to Sarlos	1,068.01	300.00	320,403.00
Churches Ferry-Int. Bdy. (via St. John)	1,245.60	300.00	373,680.00
York to Dunseith	614.73	200.00	122,946.00
Rugby to Antler	1,315.17	250.00	328,792.00
Towner to Maxbass	636.63	200.00	127,326.00
Granville to Sherwood	920.45	200.00	184,090.00
Berthold to Crosby	1,336.86	250.00	334,215.00
Halsted to Alton in North Dakota	109.00	200.00	21,800.00
Addison to Chaffee	167.01	200.00	33,402.00
Casselton to Portland Jct. (via Mayville)	844.59	300.00	253,377.00
Rutland to Aberdeen Line in N. Dak	126.65	150.00	18,997.00
Ellendale Line	1,646.22	200.00	329,244.00
Wahpeton to Larimore (via Portland)	2,184.65	300.00	655,395.00
Ripon to Aneta	1,084.13	300.00	325,239.00
Wahpeton to Moorhead in North Dakota	82.30	250.00	20,575.00
Larimore to Hannah	1,773.98	300.00	532,194.00
Aneta to Devil's Lake	1,195.31	250.00	298,827.00
Total outside of terminals	27,836.75	$300.92	$8,376,664.00
TERMINALS.			
Grand Forks	131.41	$7,000.00	$ 919,870.00
Devil's Lake	276.15	2,000.00	552,300.00
Minot	88.01	5,000.00	440,050.00
Total Terminals	495.57	$3,858.52	$1,912,220.00
State exclusive of terminals above shown	27,836.75	300.92	8,376,664.00
Total for State	28,332.32	$ 363.15	10,288,884.00

SOUTH DAKOTA.

Location.	Acres.	Av. value per Acre.	Amount
Minnesota State Line to Yankton	1,453.00	$537.00	$ 781,666
Sioux City Line (on South Dakota)	115.66	248.00	28,670
Aberdeen Branch	840.14	298.00	250,000
Huron Branch	1,946.38	170.00	329,000
Total	4,355.18		$1,389,336

IOWA.

Location.	Acres.	Av. Value per Acre.	Amount.
Minnesota State Line to Sioux City	1,064.00	$300.00	$319,200.00
SIOUX CITY TERMINALS.			
W. & S. F. outside yard	155.05	500.00	77,525.00
Iowa & G. N. Terminal	26.56	11,446.49	304,019.00
Union Terminal Ry. Co	34.85	37,302.72	1,300,000.00
Total Terminals	216.46	$7,768.38	$1,681,544.00
Total for State	1,280.46	$1,562.52	$2,000,744.00

MONTANA.

Location.	Acres.	Av. rate per Acre.	Amount.
1. Dakota State Line to Havre	6,425.56	$111.00	$ 812,357
2. Havre to Whitefish	6,557.32	65.00	426,226
3. Whitefish to Idaho State Line	3,738.88	100.00	373,888
4. Rexford Jct. to Gateway	143.01	67.09	9,695
5. Columbia Falls to Lakeview	1,080.44	252.90	273,340
6. Somers Branch	194.00	168.81	32,750
7. Havre to Great Falls	3,305.89	129.92	429,515
8. Great Falls to Butte	2,908.68	184.32	516,127
9. Great Falls to Neihart	1,165.36	75.00	87,402
10. Sand Coulee Branch	212.46	63.50	13,492
11. Cottonwood Coal Branch	54.54	75.00	4,089
12. Mountain View Spur at Butte	40.96	750.00	30,720
13. Great Falls to Sweetgrass (International Boundary)	3,107.54	62.00	192,667
14. Armington to Judith Gap	2,666.10	26.70	71,134
Amount outside of Terminals	31,600.74	103.59	3,273,402

MONTANA—CONTINUED.

TERMINALS.	Acres.	Av. Value per Acre.	Amount.
Great Falls	620.85	$706.07	$ 438,367
Helena	258.75	1,343.04	346,511
Butte	72.00	13,888.89	1,000,000
Amount	951.60	.....	$1,784,878
Total for State			$5,058,280

IDAHO.

Description.	Miles.	Acres.	Rate per Acre.	Total Valuation.
G. N. Main Line	80.24	1,650.00	$100.00	$165,000
Kootenai Valley Ry	25.79	400.00	100.00	40,000
Total	106.03	2,050.00	$100.00	$205,000

WASHINGTON.

Location.	Acres.	Av. Value per Acre.	Amount.
Idaho State Line to Everett	8,050.60	$211.49	$1,702,600
Everett to Ballard	325.00	526.15	171,000
Everett to International Bdy. at Blaine	1,145.06	550.12	630,000
Anacortes to Rockport	787.42	124.00	97,650
Hillyard to Int. Bdy. at Northport	2,566.42	109.42	279,600
Washington & Great Northern Line	1,729.46	123.61	213,678
Columbia & Red Mountain Ry	168.00	60.00	10,800
Total in State, outside of Terminals	14,771.96	$210.20	$3,105,328
TERMINALS.			
Spokane	315.68	$11,879	$3,750,000
Bellingham	108.00	7,639	825,000
Anacortes	25.00	4,000	100,000
Everett	250.00	6,000	1,500,000
Seattle	375.41	64,144	24,080,110
Total Terminals	.....	.....	$30,255,110
Total in State	.....	.....	$33,360,438

LINES IN MANITOBA, CANADA.

Location.	Acres.	Av. Value per Acre.	Total Value.
B. S. & H. B. Ry., Brandon Line	1,162	$158.51	$184,185.00
Midland Ry. of Manitoba, Portage La Prairie Line	1,109	132.30	146,718.00
Midland Ry. of Manitoba, Morden Line	243	115.23	28,000.00
Total	2,514	$142.76	$358,903.00

BRITISH COLUMBIA LINES.

Description.	Acres.	Av. Value per Acre.	Amount.
VANCOUVER, VICTORIA & EASTERN RY. & NAV. CO.:			
Laurier to Danville, including Spur into Gr. Forks	227.51	$355.82	$80,951.53
Grand Forks to Granby Smelter	77.00	166.46	12,817.34
Phoenix Line	300.40	342.14	102,779.69
Midway to Molson	420.80	100.00	42,080.00
Chopaka to Keremeos	214.32	186.51	39,972.33
Cloverdale to Port Guichon	205.67	400.00	82,268.00
New Westminster to Vancouver	182.00	862.31	156,940.00
CROWS NEST SOUTHERN RY.:			
Gateway to Fernie	883.90	52.62	46,517.00
Fernie to Michel	341.00	162.40	55,377.65
NELSON & FT. SHEPPARD RY.:			
International Bdy. to Troup Jct	831.30	75.00	62,347.00
RED MOUNTAIN RY.:			
International Bdy. to Rossland	132.65	645.54	85,632.00
NEW WESTMINSTER SO. RY.			
Blaine to Brownsville	319.20	228.19	72,840.00
KASLO & SLOCAN RY.:			
Kaslo to Saudon and Cody	475.00	23.22	11,030.00
BEDLINGTON & NELSON RY.:			
Int. Bdy. to Kuskanook	363.69	70.00	25,467.00
Totals	4,974.44	176.31	877,019.54
TERMINALS.			
Vancouver	110.25	$20,786.39	$2,291,700.00
Total in Province	.....	.....	$3,168,719.54

RIGHT OF WAY AND STATION GROUNDS ON LINES UNDER CONSTRUCTION.

Location.	Acres.	Av. Value per Acre.	Amount.
MINNESOTA:			
Greenbush to Warroad	743.65	$ 31.21	$23,206.87
MONTANA:			
Judith Gap to Laurel	1,767.92	44.61	78,866.00
WASHINGTON:			
Wenatchee North Line	282.50	$ 111.34	$31,452.47
Waterville Line	338.56	36.48	12,352.14
	621.06	$ 70.53	$43,804.61
BRITISH COLUMBIA:			
VANCOUVER, VICTORIA & EASTERN RY. & NAV. CO.:			
Keremeos to Princeton	310.39	$ 67.99	$21,103.00
New Westminster to Olivers	102.11	342.26	34,948.18
Cloverdale to Sumas	506.00	84.82	42,918.50
Blaine to Olivers	159.30	86.69	13,809.19
	1,077.80	$ 104.64	$112,778.87
Totals	4,210.43	$ 61.43	$258,656.35
TERMINALS ON LINES UNDER CONSTRUCTION:			
Winnipeg	259.32	$ 4,563.61	$1,183,436.00
Tacoma	17.00	20,000.00	340,000.00
Total			$1,523,436.00
GREAT NORTHERN INTERESTS IN OTHER TERMINAL COMPANIES.			
St. Paul.....Minn. Transfer Ry. Co., G. N. Inst. 1/10			$575,619.00
St. Paul.....St. Paul Union Depot Co., G. N. Inst. 1/9			610,572.00
Superior.....Lake Superior Terminal & Transfer Ry. Co. of Wis., G. N. Inst. 1/3			116,725.00
Total			$1,302,916.00

Q. The first page of this exhibit, Mr. Hayden, as I understand it, contains a general summary of right of way, station grounds and terminals on lines in operation, of the Great Northern Railway system in the different states. That is a correct statement, is it, of the different states in which the system runs?

A. Yes, sir; including the Province of Manitoba and the Province of British Columbia in Canada.

Q. Certain lines that extend up into those provinces?

A. Yes, sir.

Q. And the mileage, 6760.66, how is that ascertained?

A. That is the mileage of the main track, and that mileage is obtained from the chief engineer's records.

Q. It is a matter of actual computation from the engineer's records, of the actual mileage of main track?

A. Yes, sir.

Q. The next column is a computation of cost of reproducing the right of way and station grounds outside of terminals. To what extent are terminals excluded from that column?

A. To the extent as shown on the second page. I think there are 17 larger cities or larger terminals which we have excluded from the ordinary right of way and station grounds —made a separate exhibit of those.

Q. With the exception of those 17 larger terminals, the terminal grounds in smaller towns and villages are included in the third column?

A. Yes, sir.

Q. Together with the so-called country right of way?

A. That is correct.

Q. The next column contains a summarized statement of the value, as you view it, of the cost of re-acquiring those 17 terminals?

A. Yes, sir.

A. And the final column is a totalization of those values shown in the preceding columns referred to?

A. That is correct.

Q. Turning on to the next page, you state you have shown there the 17 largest cities on the system.

A. The largest in the sense of being the largest terminals, that is, of the most value.

Q. They are the 17 cities at which the Great Northern terminals are of the most value?

A. Yes, sir.

Q. The acreage of those 17 is obtained how?

A. From our actual right of way maps in the office, showing the area.

Q. Those are actual quantities?

A. Yes, sir.

Q. I will come to your method of arriving at the figures a little bit later, but the figures you apply per acre have been applied to the actual quantities?

A. Yes, sir.

Q. And the total is shown in the last column?

A. That is correct.

Q. On the same sheet are certain terminals on lines under construction. Those are only two in number. They are certain terminals which you have in Winnipeg, and Tacoma, Washington?

A. That is correct.

Q. The next part of the same page contains the statement of the Great Northern interest in other terminal companies, namely, the Minnesota Transfer, the St. Paul Union Depot Company, the Lake Superior Terminal & Transfer Railway Company. Now, those three terminal companies are utilized as a part of the Great Northern system for the purpose of supplying the system with terminals at the places where these terminal companies operate?

A. Yes, sir. I will state that the figures given on this sheet for the terminals on lines under construction and the interest in the other terminal companies were not included in my total figures in this statement.

Q. They are not included in the total figures on page 1?

A. No, sir; that is correct.

Q. Turning now to the third page, will you state briefly what that recapitulation is meant to show?

A. On page 3 is a recapitulation of the right of way and station grounds on lines in operation, exclusive of terminals shown on preceding sheet No. 2, but including right of way and station grounds in 370 villages, towns and cities of over 200 inhabitants each; and then an itemization of the location in different states, the number of miles in each state, the average rate per mile for right of way and station grounds, the number of acres in each state, the average rate per acre, the total amount in each state, which corresponds with the same item on sheet No. 1 under "Right of Way and Station Grounds Outside of Terminals."

Q. The column entitled "Average rate per acre" in these

different states is figured including the acreage that is embraced within 370 villages, towns and cities that have over 200 inhabitants each?

A. Yes, sir.

Q. Below that table you have a table relating to lines under construction. What is that?

A. Those are lines on which we have not yet placed the iron, or begun to operate. They are lines under construction for which we have obtained right of way either in whole or in part, and these figures are also not included in the totals on the first sheet.

Q. Certain of the larger elements of value seem to be in the cities of St. Paul, Minneapolis, Spokane and Seattle, together with certain others. Will you state how you arrive at the figures relating to St. Paul and Minneapolis?

A. In St. Paul and Minneapolis we had three real estate men, the best men we could find in their profession in the two cities, who were selected by reason of their qualification as expert real estate men, who had large experience in buying and selling real estate, and we asked them to make an appraisal of our property as bare real estate without any improvements upon it, and based upon the values of adjacent property. These men were appointed in the fall of 1906 (September, I think it was) and we furnished them with maps and gave them instructions as to what we wanted, but not for the purpose for which we wanted it—just the instructions to make a valuation of our property as real estate.

Q. Was anything said to them as to whether the railroad was interested in a high or low valuation?

A. No, sir.

Q. Was anything said to them as to what the purpose of the valuation was?

A. No, sir.

Q. Mr. Thomas Cooper has testified somewhat along the same line. Was the appointment of this committee coincident with the appointment of the committee generally by the railroads here in St. Paul for the purpose of making up a return to the State of Minnesota?

A. Yes, sir; the men we selected in St. Paul and Minneapolis were the same men for the different railroads who were in that conference in the fall of 1906; and the purpose of that conference was to get together and see what was necessary to be done in order to comply with the requirements of the State as to the report that we would have to make to the State

Railroad and Warehouse Commission, and it was determined that it would be better to select a committee of real estate men in each city, St. Paul and Minneapolis, and let them make the appraisal of property for the different railroads, without saying to them what the purpose was, or anything more than just to make an appraisal on a real estate basis. I think the roads in this conference were the Northern Pacific, the Milwaukee & St. Paul, the Rock Island, the Omaha, and I think the Soo (I wouldn't be sure about that), but there were several of the larger companies interested at that time.

Q. What have you to say as to the character of the men and their standing in their profession as real estate men in St. Paul and Minneapolis?

Mr. Wimbish: I don't think that is a proper question, may it please the Court.

Mr. Holden: Why not?

Mr. Wimbish: I don't think this witness can testify to their character and standing.

Mr. Holden: If he knows the fact that they have a certain standing in the community I do not see why it is not proper for him to so state.

The Master: I will allow the question.

A. As I stated before, we selected men whom we considered were the very best men we could find in the city in their profession.

Q. Now, briefly, that committee met, and after some period of time had elapsed, returned to you what?

A. They returned to us our maps, with a statement showing what they considered the value of our property was per square foot in certain districts in each city. They had taken the maps and divided them up into districts, for instance between streets running along our main track, starting at the Union Depot with our property (the Great Northern property), they put on a certain value per square foot up to Broadway, and then another value per square foot from there on to the next subdivision, and so on through the city out to the western limits. And the same in Minneapolis. They did not give us a total valuation of our property or a valuation of any particular district, but simply what their judgment was as to the value per square foot within those districts.

Q. What did you then do with their figures?

A. We took the maps then and figured the area there was in the right of way and terminal grounds in those different districts, and applied the square foot values given by the real

estate men to those areas, which produced a valuation as real estate without improvements. In St. Paul and Minneapolis I added to the real estate men's figures, or values, as we found them, an additional 25 per cent., to cover what I considered was the railroad value—that is, what we would have to pay over and above what the land could be purchased for as a commercial proposition by a private corporation or an individual. That included the damage by severance in case any lots were partly taken, and also the damage sustained by reason of any buildings which we might have to remove, as we often find in buying right of way and terminals there are buildings and improvements which have to be destroyed, which add to the cost of the bare land; and that percentage was added after considerable careful thought was given to the matter, and I considered 25 per cent. conservative for that purpose.

Q. In making the addition of that percentage to what extent were you guided by your past experience in matters of this kind?

A. Well, almost wholly. Of course, we have never had as much right of way to get at any one time as that would involve, but, judging from our experience on similar tracts, I think 25 per cent. is very conservative.

Q. You said something about making the railroad value, or making a figure which would fairly represent, in your judgment, the railroad value. What do you mean by "railroad value"?

A. The difference between a railroad value and a commercial value is this: If a person starts out to buy real estate for commercial purposes or business purposes he has a choice of selection. If he cannot get the lot he wants he can buy a lot some place else in the immediate vicinity; but in a railroad right of way you have got to buy exactly what the engineer says he requires; you have to buy it whether it is at a reasonable price or an unreasonable price; and we find we have to pay more in the end in buying property that way than we would if we had our choice of sites.

Q. Then, as I understand you, the computation shown of the St. Paul and Minneapolis terminals is an application of the per square foot figures given you by this committee to the acres plus an addition of 25 per cent., to reach what in your judgment was necessary to show as the railroad value of the lands?

A. Yes, sir.

Q. The computations have been checked and are accurate, are they?

A. To the best of my knowledge and belief I think they are accurate.

Q. Will you speak regarding the terminal properties at Seattle?

A. At Seattle I had my western right of way agent, Mr. Snapp, who was stationed at Seattle, employ some real estate men there to help him make an appraisal of our terminals in that city. He selected ex-Governor Magraw, of the State of Washington, who was a resident of Seattle and in the real estate business there, furnished him with maps, and went over the ground with him, showing him the property, and then had him make an appraisal of what he considered the land was worth as real estate without improvements, just as we had done here in St. Paul. The appraisal in Seattle is made up partly on the judgment of Mr. Magraw and the judgment of our own western right of way agent and that of myself and our attorney, Mr. Gilman, who went over the matter very carefully for the Portland hearing in the Spokane rate case; and the figures I have in this estimate are exactly the same that we used at Portland, with the exception that in our terminal properties at Seattle we have since made a subdivision and segregation, giving the Northern Pacific a certain percentage of that terminal strip. In the Portland hearing we had it divided one-half interest each in certain parts of the property. In the segregation of the interests we found that we had a little more than one-half interest as to value in that same strip, and these figures were changed to that extent; otherwise they are the same as those which we used at Portland.

Q. Now, as to these smaller terminals, property located in other places, without taking too much time, what effort and care did you use toward getting those figures at those places?

A. Taking them in order, in the city of—

Q. No, it is not necessary to do that, unless counsel calls for it. I would like you to make a brief statement of that subject, so we can get along a little faster, perhaps.

A. I had real estate men and bankers and others at the smaller places give me their estimates of what town lots were worth adjacent to our station grounds, through the different parts of the towns, and then I applied those prices per lot to the area of our station grounds immediately opposite, dividing the station grounds and terminals into town lots and blocks of the same relative size, and got at the values in that way,

adding a percentage varying from 25 per cent. in the larger places to as high as 50 per cent., and sometimes as high as 75 per cent., in the smaller places, according to the condition at each place. My judgment is and my experience is that in the larger places we would not have to add as large a percentage for the railroad value as we do in the smaller places, because the property is more available for larger business sites in the larger places than it is in the smaller places, and the prices for commercial property are necessarily higher in the larger cities than in the smaller cites.

Q. You spoke about the Spokane hearing. That has been referred to a great many times in this case. You made up your figures for that hearing approximately two years ago and testified before the Interstate Commerce Commission at that time, did you not?

A. Yes, sir.

Q. And how long have you been engaged in considering this question of the fair cost of reproducing the lands of the Great Northern system and investigating by your own efforts and by securing opinions of other people on that general subject?

A. Since the year 1903, when we started to make an appraisal for the tax commission of the State of Wisconsin. That appraisal was confined to the State of Wisconsin. And then in 1906 we began making inquiry as to the values of our property, cost of reproduction on the entire system, first for the State of Minnesota and later for the Spokane rate case; and have been at it almost constantly ever since.

Q. Just what do you mean by being at it almost constantly ever since?

A. Well, it has been up in different forms, for state valuations or rate cases, ever since.

Q. If I may ask you a leading question (I guess there is no objection to it), have you been conducting a more or less continuous investigation into this subject ever since you made your beginning at it, and particularly since you were called upon by the State of Minnesota to make the report in 1906?

A. Yes, sir; I have.

Q. And with reference, perhaps, to the State of Minnesota, have you had occasion to go out on the line numerous times, to make investigations in your own behalf?

A. Yes; I have been out over the lines in Minnesota several times in the last six months.

Q. To what extent during your experience in connection with the right of way department have you been over the lines of the Great Northern system?

A. I have been over the entire system, practically every mile of it, and some of it a great many times; the main lines in going to and coming from Seattle and other points on the coast, and the branch lines in obtaining right of way, additional right of way, station grounds and things of that kind.

Q. Do you feel that you are personally familiar and acquainted with substantially all of the mileage where there are important terminals or elements of value in the lands?

A. Yes, sir. I have been over them on foot—a great many of them.

Q. On foot?

A. Yes, sir.

Q. Now, your figures as contained in this exhibit are, to some extent, different from the figures reported to the Minnesota Railroad Commission, are they not?

A. They are as to the State of Minnesota, yes, sir. I found in making up the first return to the State of Minnesota, which was done in more or less of a hurry, that quite a number of errors crept into the statement in the way of differences in acreage and in the carrying out of the extensions of the rates and the amounts; and in the summer of 1908 I obtained additional blanks from the state engineer to prepare a new statement correcting the errors in the first statements made. I made up such a statement, but I found in going over it with the additional information that I had obtained that it would not be a fair statement of our reproduction value, and I therefore prepared a new statement entirely for the Minnesota rate hearing. Before I did that I went out over the lines and personally investigated the values in a number of the cities and towns on the line. I sent out the different agents along the line and had them get the opinion of real estate men, bankers and others as to farm land values, and from the information thus obtained I made a new statement which reduced the valuation of the right of way, outside of the three terminals of St. Paul, Minneapolis and Duluth, about two and one-half million dollars, and those figures are the same as those which I have used in this statement. The terminals I did not change.

Mr. Teal: Do you remember the difference between the value fixed by the State of Minnesota Railroad and Warehouse Commission on the lands and terminals in Minnesota and your value?

The Witness: I only have it in lump; I have it here in the statement.

Mr. Teal: I did not want to interrupt the examination, but I thought perhaps you might have it.

The Witness: I can give it to you if you wish.

Mr. Teal: All right.

The Witness: In our statement to the State of Minnesota we had for right of way and terminals a total value in the state of $33,033,430, and the state's estimate on that same property is $16,656,247. Those are the totals. I haven't got the state's figures yet.

Q. Now, passing on to page 4 of your exhibit, that embraces the lands located in the State of Wisconsin, of which there is not a great deal. You have 520 and a fraction acres, at an average rate of $162. Do the figures shown on that page represent, in your judgment, the present value of those properties as railroad lands?

A. Yes, sir; what I estimated it would cost to reproduce them at this time.

Q. Now passing to the Minnesota figures, on the next page: you have shown the Minnesota lines in 46 different divisions. Those divisions coincide, do they not, wth the divisions of the Minnesota lines made by the Minnesota Railroad and Warehouse Commission?

A. Well, I don't know that they are made by the Commission. They were made, I think, by our engineering department, with the consent of the Commission.

Q. After conference?

A. After conference, yes.

Q. For convenience in handling, the line was divided up in this manner, into those divisions?

A. Yes.

Q. The acres shown there, I take it from what your testimony has already been, are actual acres from your right of way map?

A. Yes, sir.

Q. And the "average value per acre" includes the cities and towns and village which are embraced among those 370 referred to on page 3 of the exhibit?

A. Yes, sir.

Q. Now, will you state what, if any, multiple you have used in ascertaining the figure for the country right of way?

A. Outside of the towns and villages we have taken about three times the average value of farm lands; it does not run uniform, but that is about the average. It varies somewhat in some places. But the multiple of 3 was a figure which we used, after conference with the right of way agents of other railroads in order to fill out the State of Minnesota blanks.

They asked for two columns—one showing the market value and the other the right of way value. The market value we took to mean the value of the land in large tracts, as whole farms; and in the towns as full town lots; and the right of way value what it would cost us to obtain a certain number of acres of that same class of property. In the country right of way we have to pay more than the price per acre for the acreage we take, because there is a good deal of damage to the balance of the land by reason of severance of the farm into separate pieces, different pieces, and the damage to buildings, either by destroying them or our proximity to them, and the taking of other improvements, such as wells and fences, meadow pastures cut in two, and all that sort of thing; all has to be taken into account.

Q. Does the presence of a railroad running through a man's farm actually or in his own mind lead him to claim an element of damage on that account?

A. Yes, sir.

Q. Noise, danger to himself and his children and his stock, and all of those elements you have reference to, I take it, in using the term "severance damage"?

A. That is true.

Q. And is it or not a fact that in the Minnesota rate case the multiple of 3 was agreed to by the engineer of the Railroad and Warehouse Commission as a reasonable average for the purpose of ascertaining the difference between the farm value and the railroad value?

A. I think that is correct. Mr. Morgan has used about that same rate—I think in fact the multiple of 3—in his estimate.

Q. And from your knowledge and experience of railroad right of way matters generally, is that or not a conservative basis upon which to make such an estimate?

A. Well, I think it is in the case of Minnesota at this time. I do not think you can use any uniform multiple for getting at the right of way value as distinguished from the market or farm land value for right of way. The percentage varies very greatly in different parts of the state, in different parts of our line through the country. In new country, where we are building a line into a territory which is not supplied with railroads, where the settlement is very sparse and the people are anxious for a road, we do not have to pay three times; but where it is settled up, and they do not need the railroad very badly, and where their improvements are better and the

damage is greater, we have to pay more than that in a great many cases.

Q. What has been your experience in such districts in reference to paying more than that?

A. Well, we can hardly anticipate where it is going to cost us more or less except in the very new countries. We have had cases where we have had to pay as high as—well, from ten to fifty times the actual value of the land, for a right of way, and then at the end of a lawsuit, in places where we could not anticipate there would be anything more than just the actual land value, or perhaps one or two times as much as that.

Q. Have you any specific instances in mind? If I may direct your attention to one, I think you spoke to me of one down on the Hutchinson branch, where you had occasion to acquire some land from a land owner there, and afterwards resold some surplus portion of it back to him. Will you state the facts in that regard merely as an illustration of what you are now talking about?

A. I do not seem to have that particular instance there, but my recollection is it was the land of a man by the name of Schmidt, just west of Excelsior, on the old Hutchinson branch. We ran through his farm and went between his holding and the public road, and had to change the highway in one or two places to get around. That land was worth, I should say, about $100 an acre, on account of its vicinity to the town of Excelsior. We paid Mr. Schmidt, at the end of a lawsuit, a fraction over a thousand dollars per acre for the right-of-way. Later, the line was changed at that place and put on the north side of Lake Minnetonka and that part of the line west of Excelsior was abandoned. We sold back to Mr. Schmidt the same land, if I remember, for something like a hundred dollars.

Q. Per acre?

A. No, the whole thing. It was about three acres. That is one of many instances in that same vicinity, on that same line. We paid all the way from $200 to $400 or $500 an acre for quite a number of tracts in through Hennepin and Carver counties, and later, when the line was changed, we sold back those same pieces at practically $10 to $20 an acre.

Q. Generally speaking, does that state of facts to a greater or less degree exist all over the system, and have you had such experiences throughout the system?

A. Yes, we do have experience almost in every locality

where we get right-of-way. We get some of it at a reasonable price, and others of it at a very unreasonable price.

Q. And these figures relating to the lines in the state of Minnesota, passing now on to page 6, embrace all of the lands including the large terminals, a total sum of $30,635,921?

A. That is correct.

Q. On page 7 you have a somewhat similar condition of the lines in the state of North Dakota. To what extent, Mr. Hayden, have you exercised care in ascertaining these values and showing the results in the last column on the page?

A. Well, this was arrived at in about the same manner as Minnesota, by writing to our different station agents and having them interview real estate men at their various stations along the line, to get the average value of the farm lands in their vicinity, and also the value of town lots adjacent to our right-of-way, without improvements, and by personal examination and by the knowledge which I have myself of the values by reason of having acquired either personally or directing purchases of right-of-way on the different branches and on the main line through the state.

Q. What multiple, approximately, did you use in that state?

A. Outside of the cities, I think we used about three times —in North Dakota.

Q. And is the same true of the next sheet relating to South Dakota, as to the method you used in getting these figures?

A. Yes, sir.

Q. And also in the state of Iowa, on page 9?

A. Yes, sir; that is correct.

Q. Is it also true of the lines in the state of Minnesota?

A. Yes, sir, that is correct also, outside of the terminals.

Q. Now, you have shown a figure of $1,000,000 in the city of Butte for 72 acres. Will you state how that figure was arrived at and what in your opinion as to its being a fair figure?

A. The city of Butte was a little hard to value, for the reason that Butte is a peculiar city in the fact that it is a mining town, said to be the largest mining-camp in the world, and the property is very valuable; and while we only had surface rights on a great deal of that property, it was in such position that it could hardly be reproduced at any price today, if we had to go and buy it now, by reason of the interference with their mining operations, and in regard to the city of Butte it is more of a guess than an actual estimate, because it can hardly be estimated. $1,000,000 is what I considered we would have to pay if we had to go and reproduce our property, our terminals and all in the city of Butte, and the line leading

from the top of the mountain, at the tunnel, down through the different mining claims to the depot on the main street.

Q. You gave the situation there your own special individual consideration, did you?

A. Yes, sir. I have been to Butte a great many times. I have spent considerable time in Butte at various times, and am very familiar with the conditions there and the values and the prices demanded for right-of-way.

Q. Did you take advice and have consultation with others there for the purpose of ascertaining the prices that were being paid, and matters of that sort, there?

A. Yes, I did, with several of the real estate men at that place.

Q. The state of Idaho; your testimony already given, I take it, applies to the acreage in that state. It is a very small amount.

A. Yes, sir.

Q. And in the state of Washington, outside of the terminals, would it also be true as to that acreage?

A. Yes, sir.

Q. You have already referred to the figure relating to the Seattle terminals. What was done to ascertain the figure relating to Spokane? You have 315 and a fraction acres in that city, and the total figure is $3,750,000.

A. In regard to Spokane, the acreage is the same as it was in the Portland hearing. The amount which I have given here, $3,750,000, is higher than it was in the estimate for the Portland hearing. For the Portland hearing we had the right-of-way valued by Fred G. Grinnell, of Spokane, and it was done in rather a hurried manner because of the scarcity of time to prepare for the Portland hearing. The figures were obtained from him and from others at Spokane. We put in a valuation of about 2-1/2 million dollars for our right-of-way and terminals in Spokane city, including Hillyard. Since that time we have had a careful appraisal made by a prominent real estate man, Mr. Walker L. Bean, in detail. His figure amounted to 3-1/2 million dollars. I have added $250,000 to his figures for the right-of-way value. His figures are the real estate value.

Q. The city of Everett shows a figure of $1,500,000.

A. Yes, sir.

Q. State briefly how you arrived at that.

A. The city of Everett was appraised by two real estate men, employed by us at Everett, who placed the valuation at a million and a half dollars, and also by Mr. John T. Mc-

Chesney, who is the owner of the townsite at Everett, and who has had more to do with the buying and selling of real estate there than any other one man, and my own judgment as to right-of-way values and real estate values from a great many visits to the town and a good deal of time spent there, and the consensus of opinion is that $1,500,000 is a very fair, conservative figure for the value of our property in that city.

Q. Your lines in Manitoba, Canada, are shown on page 13. Did you arrive at the average value per acre there in substantially the way that you have already shown in your testimony?

A. The lines in Manitoba represent the actual cost of the lines, which were obtained three or four years ago, with a very slight percentage added for increase in value up to the present time. The multiple of 3 was not used in that case.

Q. It was not used?

A. No, sir.

Q. Those figures are substantially the actual cost?

A. Yes, sir.

Q. And the next page, numbered 14, entitled "British Columbia lines." Those embrace a number of different lines. State briefly how the average value per acre of those was arrived at.

A. In the older lines, the lines which had been built for some years, we had to arrive at the value there the same as we have in the States, by taking the value of adjacent land and multiplying by 3 for the country right-of-way. Practically all of the items in which cents are shown are actual cost of the right-of-way—nothing added to it. Those lines were acquired within the last two or three years, and I do not estimate they would cost any more today than they did at that time.

Q. On page 15 you show tabulation of acres and average value per acre of lines under construction in various states. Are those figures largely actual cost figures?

A. Yes, sir.

Q. At the end of the exhibit you have a map attached, which shows in red color the lines of the Great Northern system from the head of Lake Superior to Puget Sound; does it not?

A. Yes, sir.

Q. And the legend on the map shows the mileage in the different states. Is that an accurate showing of the mileage?

A. That is an accurate showing of the mileage as obtained from the chief engineer. This map was prepared under his direction and the mileage was furnished by him.

Q. Now, Mr. Hayden, taking this exhibit and your testimony as you have heretofore given it, will you state whether or not in your judgment the contents of this exhibit represent a fair showing of what it would cost to re-acquire or reproduce the station grounds, rights-of-way and terminals of the Great Northern Railway system?

A. It does.

Q. And that is what you were asked to prepare and furnish for this case?

A. Yes, sir, the cost to reproduce the right-of-way and terminals as of June 30, 1908.

Q. As of that date?

A. Yes, sir.

Mr. Holden: We offer in evidence this exhibit, marked Complainants' Exhibit 11 (Hayden).

Mr. Teal: It is understood the same objection is entered.

The Master: It will be received subject to the same objection.

Cross-Examination by Mr. Walter.

Q. When did you first begin the tabulation of values of right-of-way and terminals, Mr. Hayden?

A. For this case, you mean?

Q. No; of the property of the Great Northern.

A. I first began to make a system valuation in the fall of 1906.

Q. You do not want to say that the property you have been speaking about all belongs to the Great Northern Railway Company?

A. Well, either the title belong to it or the interest is owned by the Great Northern in the ownership of stock.

Q. But are not a good many of these station grounds and rights-of-way owned by railroad companies which operate in their own name?

Mr. Holden: Just excuse me, Mr. Walter. Prior to last year that was true to a more or less extent; but, as the last annual report of the Great Northern Company shows, the title of the various subsidiary companies have all been practically merged into the Great Northern Company.

Mr. Walter: They still make separate reports, do they not?

Mr. Holden: They do not—and that is just where the Spokane decision, among forty or fifty other items, is wrong on the facts. The last anuual report of the Great Northern, as of June 30, 1908, clearly shows just what I say.

Mr. Walter: Are they leased?

Mr. Holden: No; there has been absolute conveyance made by all, or practically all, of these subsidiary companies, and they are all owned and held (with insignificant exceptions) by the Great Northern Railway Company.

Q. I notice in this statement several instances where you give the names of corporations, for instance, the Vancouver, Victoria & Eastern Railway & Navigation Company. That is separately operated, isn't it?

A. The V. V. & E. is operated by the—I can't answer that question. In British Columbia we have to have a different organization from what we have on this side of the line.

Q. That is, all railroad lines north of the boundary?

A. Yes, sir.

Q. They are all separate corporations?

A. Yes, sir, and have to be. The line from Vancouver to Westminister is operated, as I understand it, by the Great Northern; we run our own trains—through trains, and have our own conductors and our own brakemen.

Q. It is, however, a separate corporation that operates those lines in Canada?

A. It is a separate organization.

Q. Now, Mr. Hayden, are you at the present time tax commissioner?

A. No, sir.

Q. Were you at the time these tables were prepared?

A. In 1906 I was the right-of-way and tax commissioner, yes, sir.

Q. When these three men were selected, or the various men were selected all along your line, you did not tell them that the purpose of this valuation was for taxation, did you?

A. No, sir, I didn't tell them what the purpose was.

Q. I believe you say that in about 1906 there was a meeting of the various representatives of the railroads here in St. Paul and Minneapolis?

A. Yes, sir, that is true.

Q. And at that time you were present?

A. Yes, sir.

Q. And you canvassed the situation?

A. We did.

Q. And suggestions were made by the various representatives of the railroads?

A. As to how we would go about to make the valuation, yes, sir.

Q. And in adopting that plan it was not at all understood that the purpose of the valuation was for taxation?

A. No; the purpose at that time was to make the report to the Railroad and Warehouse Commission of Minnesota. They furnished us blanks for that purpose.

Q. Had the Railroad and Warehouse Commission advised you of the purpose for which they desired the facts as to valuation?

A. Not to my knowledge. We were to make what we considered a fair appraisal of our property.

Q. Now, that appraisal was made, and was more than 200 percent of the valuation fixed by the state authorities?

A. The state authorities at that time made no valuation.

Q. Well, but they have lately fixed—

A. They only tell us what they have done in a general way with the Great Northern property; I cannot say as to any other.

Q. I am speaking now of the Great Northern. Of the Great Northern property your valuation was 200 per cent greater than the valuation fixed by the state authorities?

A. You mean about 100 per cent greater?

Q. Yes; I mean your valuation is twice that of theirs?

A. Theirs is half of ours, I will say, in other words.

Q. All right. Now, Mr. Hayden, who were the men selected by the carriers to make the investigation of the value of the St. Paul and Minneapolis property?

A. In St. Paul it was Oscar L. Taylor, Mr. John J. Watson, and Mr. William C. Reed.

Q. At that time or previous thereto had any of these three gentlemen occupied any position with any of the carriers engaged in having their property valued?

A. I can only say as to the Great Northern. Of course the others I could not say anything about. The only man who had had any connection whatever with the Great Northern might have been Mr. Taylor; he purchased for us some property right near the union depot.

Q. He was, in a sense, your purchasing real estate man?

A. No, he was not. He was simply an outside agent whom we got to purchase some property which we could not do openly.

Q. Well, whenever you wanted to reach property for the railroad, you got Mr. Taylor to do it for you?

A. No, not always; he just happened to be the man in that particular case and in one or two others.

Q. You used him for that purpose? He was friendly to your interests?

A. Not any more so than any other real estate man would be.

Q. It was a matter of public knowledge that this report was to go to the Railroad and Warehouse Commission, wasn't it?

A. I think so. It was published in the papers that such a report was to be made.

Q. And there is no doubt in the world that the real estate men who made the valuation knew that it was to go to the Railroad and Warehouse Commission?

A. If you mean to infer that they made their valuation on that basis, I say no.

Q. No, I am not asking you that; but they knew that the value they placed was to go to the Railroad and Warehouse Commissions?

A. Well, as a matter of fact we told them we wanted to make a valuation of our property for the purpose of making a return to the state.

Q. Yes; and they did know the purpose for which they were to make the valuation?

A. Not as to what use was to be made of it, no.

Q. No, but they knew the purpose for which this valuation was being made—to be transmitted to the State Railroad and Warehouse Commission?

A. Yes, we told them what we were going to do with it.

Q. Now, a great deal of your property in St. Paul and Minneapolis is platted, isn't it, in streets and alleys?

A. It was when we got it, yes.

Q. And has a good deal of that been closed up?

A. Very considerable of it, yes, sir.

Q. And are those streets included in the acreage which you give in the statement here?

A. They are, yes, sir.

Q. Did you pay anything for the closing of the streets?

A. Not for the closing, but we paid, in a great many cases, for the abutting damages to the streets; and by the purchase of the abutting property we acquired the fee in the streets which, when the vacation was made, inured to our benefit.

Q. And that street area which, if it had any claim at all was indirectly, is embraced in the acreage here at the value which surrounding property takes?

A. Yes, that is correct.

Q. At the time this valuation per square foot was made, had the streets been vacated to the same extent as now?

A. Yes, that is true.

Q. There has been no additional vacation since that time?

A. No, I think not, neither in St. Paul nor in Minneapolis, nor in fact any of the places.

Q. These three gentlemen placed on the property a valuation per square foot?

A. Per square foot, in different areas, in different cities.

Q. Do you remember the minimum and maximum of those rates?

A. Yes; in St. Paul it ran down as low as either ten cents or 12-1/2 cents, up to $8.

Q. $8 was the highest?

A. That was the highest; that was right down by the depot.

Q. How long were these three gentlemen engaged in this work?

A. It is only a matter of recollection, but I should think two or three weeks before we got their reports.

Q. In St. Paul you have 354 acres. How many different parcels go to make up that acreage?

A. Do you mean original parcels, lots and blocks and acreage property?

Q. Yes.

A. I could not even approximate it.

Q. Well, about.

A. There must be at least several thousand.

Q. And the same is true of Minneapolis?

A. Yes.

Q. The values must, of course, vary very greatly even in parts very close together.

A. That is true.

Q. During the time these men were engaged, did your office give them any assistance?

A. No, we gave them no assistance at all. The only assistance we did give them was to give them a map showing our property through the city.

Q. Did you talk with them during that time?

A. No, sir.

Q. Did any of your office force?

A. No, sir.

Q. And during the three weeks they were engaged they valued all the railroad properties of the parties mentioned in this hearing?

A. Yes, sir.

Mr. Holden: You mean in the city of St. Paul?

The Witness: Yes, sir.

Mr. Walter: And in Minneapolis.

Mr. Holden: No, there was a different committee in Minneapolis.

Q. Who were the men in Minneapolis?

A. The men in Minneapolis were Mr. Barney, Mr. Elwood, and Mr. Ridgway.

Q. Did any of them have any relation to the Great Northern Railway Company?

A. None with our city property, no, sir.

Q. Had they handled any of your real estate?

A. No. The only man who did anything for us on right-of way matters was Mr. Elwood, who made a purchase for us, from a Minneapolis man, of property at Ellendale, North Dakota; but that was because he was acquainted with the man, and not because he was connected with the company.

Q. Do you know whether these men were also related in a business way with the other railroads represented at the hearing?

A. No, I could not say as to that; not to my knowledge, at least.

Q. How many different railroad companies were represented at that hearing?

A. I think I stated in the first of my testimony this afternoon the names of those I can remember; there may have been others.

Q. What was the acreage held by these roads at Minneapolis and also at St. Paul—the total acreage?

A. You mean the total?

Q. Yes.

A. I have no idea.

Q. It would foot up into the thousands, wouldn't it?

A. Yes; our own foots up, in the two cities, to nearly 800 acres.

Q. And the acreage of the various carriers, would make something in the neighborhood of 6 to 10 thousand?

A. I couldn't say as to that, because I don't know what the holdings of the other railroads are. I don't know as to that.

Mr. Holden: Not anything like that.

Q. It is composed of small parcels, distributed all over the two cities?

A. That is true.

Q. And approach very near together in places?

A. In some places they are very near together, and in some places they diverge.

Q. Now, at these two places you added 25 per cent to the values obtained by multiplying the total possessions by the value per square foot which they placed upon them?

A. That is correct.

Mr. Teal: That is true at all terminals, isn't it?

The Witness: At some of the other terminals we added different percentages—not always 25 per cent. 25 was what we used at St. Paul and Minneapolis.

Q. Is there any point where you added less than 25 per cent?

A. I think in the case of Spokane. There we had 3,500,000; we added 250,000.

Q. What was the greatest amount added at any of these places?

A. In these terminals, you mean?

Q. Yes.

A. I think perhaps in the case at Duluth. Some of those terminals were on Rice's Point. The real estate men fixed the value for the adjacent real estate at $3,000, and I put it at $9,000—that is just three times—for the reason that we had paid even more than $9,000 per acre for small tracts of that same strip.

Q. Mr. Hayden, isn't there some land here owned by the Great Northern, in these two cities, that is not at present in use?

A. If you mean isn't every foot covered by tracks, I will say there is some; but it is all in the yard, either now covered with tracks or for use in the immediate future for the extension of our yards. We have no property in St. Paul which we are holding for speculative purposes or anything of that kind.

Q. Do you have warehouses and industries located on your property in these cities?

A. We have a few.

Q. Do they pay rental?

A. Very few of them; only just along on the track, doing business over our line, but they are really on the right-of-way, they would not be called separate tracts of land.

Q. Well, they are occupied for industrial purposes?

A. They are there because they take carload shipments, and have sort of a warehouse for their use.

Q. Yes; very valuable to shippers.

A. I should think so.

Q. And they pay good rental?

A. They pay only a nominal rental. It is just an arrangement for getting business; it is more of a traffic matter.

Q. In nearly all of your terminals, with the exception of St. Paul and Minneapolis, you have a good deal of acreage property not used for railroad purposes at the present time?

A. Well, we have some; I would not say a good deal, except at Seattle, where we have quite an area which is not covered as yet with tracks.

Q. That at Seattle is valued at $64,000 an acre?

A. That is the average value. It varies, of course, in different parts of the city; a good deal more than that in some places and less in others.

Q. You have a total valuation there of $24,000,000?

A. Yes, sir.

Q. What portion of that 375 acres is devoted exclusively to railroad use?

A. I have not tried to make a segregation of that, but I should say that at least three-quarters of it was actually used today.

Q. You rent property there to industrial interests, I suppose, the same as you do here?

A. Very little. We have some warehouses along on Jackson street, right near the Union Depot, which we lease. The buildings belong to the company and we lease them to tenants for—

Q. Now, that valuation in Seattle, I believe you said, was made by an ex-governor?

A. Ex-Governor McGraw.

Q. Is he a real estate man for your company?

A. Not for our company, no, sir. He has never done any work for us, to my knowledge.

Q. Has he any relation or employment with your company?

A. No, sir.

Q. Was that his valuation—$64,000?

A. As I say, he did not make the valuation. He simply gave us his ideas of area of values, square foot values, in different parts of the city, and from his value, and from my own western representative, Mr. Snapp—from his konwledge of the actual conditions there, and also of Mr. Gilman, who is our attorney, and is familiar with right-of-way and also real estate values, and my own judgment, from being there a great many times and knowing the property, and having had to do with the acquiring of a good deal of it, it is the consensus

of opinion that this $24,000,000 is what our property would actually cost us if we tried to reproduce it at this time.

Q. Why did you add $80,110 to the $24,000,000? What does that $80,110 represent?

A. I don't understand that.

Q. You have here $24,080,110. How did you get that exact amount?

A. By taking up the areas in different districts and applying the square foot value.

Q. Didn't you take the total value of all of your holdings and apportion it to acreage in that way?

A. No, sir.

Q. And didn't you thus arrive at the total value of the Seattle property as $24,000,000?

A. We had to make that from the ground up.

Q. Did anybody submit at the meeting when you fixed the value any amount higher than $24,000,000?

A. As I say, nobody fixed any valuation. We took the area values as we found them and Mr. McGraw found them and worked up from that on the different areas and the different districts of the city. This estimate of $64,144 per acre is the average of the entire city. It varies very greatly in different parts of the city. Down around the Union Depot there and on the tide flats, immediately south of the city, that property is very valuable, and the price per acre would be greatly in excess of $64,000.

Q. The valuation you have at Seattle is as much on one acre as the combined value of St. Paul and Minneapolis—and more—isn't it?

A. Just about.

Q. And more. Are there streets laid off on your property?

A. I do not think there are any open streets through the tide flats except—well, there are a few streets through there, but not very many. We are free from streets.

Q. Those streets cost you nothing?

A. No.

Q. Now, what did you pay for your Seattle property?

A. Well, that would be pretty hard to say offhand; I haven't got it here.

Q. You didn't pay anywhere in the neighborhood of $24,000,000 did you?

A. We got property there in the early days when it was tide land property. We got it at the first appraisal made by the state of Washington as tide lands.

Q. It cost you scarcely anything?
A. It cost us considerable.
Q. How much?
A. I couldn't say.
Q. Can you give an estimate?
A. No, I could not, because I have not worked it up.
Q. How long ago did you start to acquire those?
A. We started in there in 1892 or 1893 to buy property.
Q. Now, it is true, is it not, Mr. Hayden, that a great deal of your right-of-way is across public lands, either state or national, for which you paid nothing?
A. That is true. In the building of our line, which was in the early days, we acquired a considerable right-of-way by acts of Congress and by reservations from our land grant and by charter from the state of Minnesota; that is true.
Q. And all of that land, which cost you nothing, you have appraised at the full value as though you had paid cash for it?
A. Not as though we had paid cash. I am making this estimate as of the cost of reproduction as of this date; and I assume in the case of the grant from the government that the land is now all taken up by homesteaders and has passed to other parties, and if we tried to buy it today for our right-of-way we would have to pay the same for it as any other land.
Q. Did you have any land grants exclusive of right-of-way?
A. We had a land grant from the state of Minnesota.
Q. Of how much?
A. I could not say as to that, because my work has not been with the land department.
Q. Well, about how much? You have heard, I suppose.
A. I should think about 3,000,000 acres, perhaps.
Q. Those 3,000,000 acres, received from the state, were free?
A. They were to aid in the construction of the railroad—free to that extent.
Q. And it was contributed by the state for the building of your road?
A. Contributed by the state, yes, sir.
Q. And from those lands you have received a value greater than the entire value of your railroad, haven't you?
A. I could not say as to that. That is a matter of record, though; that can be ascertained.
Q. But it is true that they have been exceedingly valuable—hundreds of millions of odllars?

A. I don't know as to the amount, but they have been valuable, because that was the purpose for which they were given to us—to sell and pay us for the cost of building into a new territory, which did not supply us with traffic at the time.

Q. The public, represented by the authorities, gave the land to the road for the purpose of aiding in its building?

A. To aid in the construction of the road, yes, sir.

Q. Now, under those circumstances do you not think it is quite proper that the railroad company should not put any extravagant value on its land or any theoretical value?

Mr. Holden: Just a minute. I submit that the witness ought not to be asked such a question as that, because he has not been called on any such theory.

Mr. Walter: I will withdraw the question; I have no desire to press it.

Q. That land grant included the ore lands, didn't it?

A. No, that did not include the ore lands.

Mr. Donnelly: No. That is where you get your hundreds of millions.

Q. Where did the land lie?

A. It lay in the Red River Valley principally.

Mr. Holden: Do you mean now the ore land or the land which was granted?

The Witness: The land which was granted. It was principally in the neighborhood of our line that runs from St. Cloud, through Barnesville, up through Crookston and to St. Vincent, and from the cities of Minneapolis and St. Paul through by Willmar and Benson out to Breckenridge.

Q. You think the ore lands were not in any grants of the state and federal government?

A. Not to my knowledge, no, sir.

Q. Now, you spoke of the valuation placed on the lands at Everett. I think you said that the owner of the townsite at Everett joined with you in the appraisal of that property?

A. That is correct.

Q. He is very much interested in having the property valued at Everett?

A. He is not interested so much, but the fact is that he has a knowledge of what the value is, from sales and from what he has been acquiring and selling property for.

Q. He is engaged in the business of disposing of land at Everett?

A. Yes, sir.

Q. Minnesota, I believe, has a system of taxation based on gross receipts and not upon real property; is that true?

A. That is true.

Q. The rest of the states through which you run have taxation based on value?

A. The value of the property per mile, mostly.

Q. Have you any record as to the valuation you have fixed upon that property for taxation purposes?

A. The records are in the office, yes; the states have fixed the value per mile.

Q. How does that compare with the valuation you have fixed in this table?

A. It is not as high.

Q. Not as high by a good deal?

A. I should say by considerable. How much I have not determined.

Q. Is it your opinion, as a man who values land, that land should have one value for taxation and another for rate-making purposes?

Mr. Holden: It seems to me that is a highly improper basis because we all know—perhaps Mr. Walter may be an exception, but we all know that we all have value of one kind when we come to talk to the tax commissioner and another when we come to sell; and there is nothing more notorious than that all taxable values are based upon a percentage of the true value—in some states it is 25 per cent., in some 50, and in some 60; and it seems to me that whole subject has no bearing whatever upon a proposition of this kind, and this witness was only asked to express his judgment, from his experience, as to what it would cost to acquire these lands.

Mr. Dillard: Those values are recognized by tax boards and in Chicago the recognized value is only about 30 per cent., isn't it?

Mr. Holden: That is it.

Mr. Walter: If the state tax is only 50 per cent. of the real value, I intended to inquire as to whether 50 per cent. is the same as the taxable valuation.

Mr. Holden: This gentleman is not the tax commissioner.

Mr. Walter: He says he knows about it.

Mr. Holden: I haven't any objection to it, but it seems to me it goes into a collateral issue which does not throw any light on this proposition, that is all.

Mr. Walter: If he can answer, I would like to have him do so; if he can't, I will let it go.

Mr. Holden: Let me see if I understand the question, first.

The following question was read: "Is it your opinion, as a man who values land, that land should have one value for taxation and another for rate-making purposes?"

The Master: I don't see how that question could be very material. His opinion on that proposition would be merely speculative, anyway.

Mr. Holden: That is exactly what I think, as indicated in my objection.

Q. If land is taxed at its full value, I will ask you whether that value would be a proper value for the reproduction of the property?

A. Well, I have doubt about that, for this reason. We first made up our estimate of valuation and estimate of reproduction in the state of Wisconsin. The state also had an appraisal made at the same time. This was for the purpose of taxation. We were asked to make an appraisal of our property for the state, and then they were going to check it up and make a valuation of their own. We had a conference at that time at Chicago with the various roads. We determined to make a fair value, just as we have in this cost of reproduction in Minnesota and the system here, and we put in an estimate there of about 3-1/2 million dollars for our property in the state of Wisconsin, and the state's figures were very close to that. Now, when they came to assess that property for taxation, the state's figures, in 1908, were in the neighborhood of $4,800,000, and the present value, that is, the value of buildings and tracks, including the right-of-way and terminals between 3-1/2 and 4 million dollars. The valuation for taxation purposes today in Wisconsin, is $8,200,000.

Q. Now, Mr. Hayden, in making the various estimates of value of your property, did you have recourse to what you paid for it?

A. No, I paid no attention to that, except to purchases made in very recent years.

Q. Does your office contain records which show the original cost of the right-of-way and the terminals?

A. They do not in every case. The records for the older lines were not kept that way, and a great many lines we ac-

quired by purchase from other roads, and those records we never did have.

Q. The purchase price paid by your company is a matter of record?

A. That would be for the entire road, though.

Q. That would include everything?

A. That would include the rails, ties, buildings, equipment and everything.

Q. Equipment and all?

A. Yes, sir.

Q. Your records contain that data?

A. I presume the records of the accounting department do; our right-of-way records do not.

Q. How far back do your right-of-way records give the cost or that which you have paid for land for railroad purposes?

A. In some cases they run back I should think, in a general way, to about 1882 or 1883.

Q. So that for purchases since that time it would not be an impossible matter to determine the original cost?

A. I will tell you, the right-of-way records show only the consideration in the deeds, that is, the price paid for the land alone. They do not show the charges for expenses of right-of-way agents and others in obtaining the land, or the recording fees or the abstracter's fees, and a good many other details that go into the cost. Our right-of-way books do not show that. They simply show the date and the consideration paid.

Q. In making your figures you have not taken into consideration the cost of buying the land and the abstract fees and matters of that sort? You have simply gone out to get the value of the property at the time?

A. As I take it, the estimate which I have made is what, in my judgment, it would cost us to go and get it of this date, if we had to go and reproduce it today. This estimate is made as of June 30, 1908, and as of that date that is my judgment as to what it would cost us to reproduce it—to go out and buy it now, at this time.

Q. It includes, then, every possible expense to which your company would be put?

A. Yes, sir.

Q. And includes matters of clerks' fees, notary fees, abstract fees, attorney fees, and everything of that sort?

A. Everything, yes, sir.

Q. You are quite sure that you have not under-estimated the value of that property?

A. I think it is conservative. I do not think it is over-estimated or under-estimated. I think it is as conservative as I can make it.

Q. You are well aware of the fact, Mr. Hayden, that it is an easy matter for real estate men to differ widely on the value of the same piece of property?

A. They do.

Q. And value such as you give in your table is largely a matter of judgment and opinion?

A. And experience in the case of a railway.

Q. A man's judgment is always determined by his experience, isn't it?

A. It should be.

Q. And men of the same experience may differ very widely in the value of property?

A. That is true.

Q. And the statement which you have given here simply embodies the opinion of yourself and men who are engaged in the purchase of right-of-way for your company, together with such men as they have called in to assist them?

A. That is, the assistance of men who are familiar with land values outside of any right-of-way values and who are not engaged in right-of-way business.

Q. It is not based on the cost of the land at all?

A. Not at all, no, sir.

By Mr. Teal:

Q. You are reasonably familiar with the situation in Seattle, are you not?

A. Yes, sir.

Q. With its commercial importance, and also, I was going to say, its population, but I don't know whether you will want to admit that or not.

A. I don't know as to population.

Q. I won't hold you down as to the population, but you are familiar with its commerce and importance?

A. Yes, I am reasonably familiar.

Q. Now, in your judgment as to business and commercial importance, how do the cities of St. Paul and Minneapolis compare with Seattle?

A. It is pretty hard to compare them, Mr. Teal. The conditions are altogether different. Seattle is really a seaport

and there is a great deal of trans-shipping done at that place and it has an enormous traffic passing through it, and the population is increasing in very rapid strides, and the valuation of the city is increasing, in nearly all parts of it, very rapidly—much more so than here at St. Paul or Minneapolis. So you can hardly compare them.

Q. I notice that here in St. Paul and Minneapolis together you have a terminal acreage of 755.

A. Yes, sir.

Q. That is reasonably well located in both of these cities, is it not?

A. Yes, sir.

Q. And in Seattle there are 375 acres plus?

A. Yes, sir.

Q. And the valuation of the 375 acres in Seattle is about $2,000,000 more than the 755 acres in Minneapolis and St. Paul together?

A. Yes, sir, and I think it would cost us that if we had to buy it today.

Q. You think that is right?

A. I think that is right.

Q. Now, as to the Seattle terminals, you have all the records there as to cost, have you not?

A. I think we have everything there, yes, sir.

Q. I would like to ask you to file as part of your testimony the actual cost to the Great Northern of securing the terminal properties covered by this statement, without regard to the structures that are upon them.

A. Just the bare land?

Q. Yes, just the bare land, so that it will be just the same as this. In Spokane there are in round numbers 315 acres.

A. That is correct.

Q. You were with the company when they built to Spokane, were you?

A. I was, yes, sir.

Q. You are familiar with how the right-of-way was acquired in Spokane?

A. Yes, sir.

Q. Covered by these terminal facilities or most of them.

A. Yes, sir.

Q. How was that acquired?

A. It was acquired partly by purchase and partly by donation of a 60-foot strip by certain citizens of the city.

Q. Clear through the city?

A. It wasn't clear through, Mr. Teal. It started at the northern or eastern boundary of the city and ran consecutively and continuously down to Broadway, at the O. R. & N. crossing, and then there was a break through Bradley and Dennison's addition, and then it started and ran across the river through what we call the Dillman tract, a 60-foot strip, what is known as the Citizens' strip, and then it crossed over the end of Havermale Island and ran up along the north side of the river to about Chambers addition, up near Boone Avenue. But that strip was not donated outright; that is, we paid for parts of it and the citizens paid for a part of it. It was not an actual free donation.

Q. A very considerable part of it, though, was paid for by voluntary subscriptions of the citizens?

A. Yes, sir, part of it; not as a city but as private individuals.

Q. I understand—as private individuals. Could you state, even approximately, how much of this 315 acres, or, rather, how much of that valuation of $3,750,000 was represented by that donation?

A. (After figuring). I estimated roughly, just a day or two ago, that the strip donated party or in whole amounted to 3.2 miles of the 60-foot width, and took in about 12-1/2 acres. I think that is a conservative valuation of that strip. The part that was donated would be about half a million dollars. Of course that is only a round-figure estimate; I have not gone into details.

Q. The city also vacated a number of streets for you, didn't they?

A. They vacated some streets, yes, sir.

Q. And that also appears in here?

A. That appears in the acreage, yes, sir; I took the acreage straight through.

Q. So, when you gave the illustration of your hard luck, you do have good luck sometimes, in getting a donation?

A. Yes, sir.

Q. A donation of that kind would cover a good many acres at $3,000 per acre?

A. Yes, it would cover several of them.

Q. It would make a fair average?

A. I don't think it would average up the total acres, because we have six or seven hundred miles against three.

Q. Now, Spokane was not the only city among these terminals that helped you out on rights-of-way and terminal facilities, was it?

A. I don't know of any other donations. We got very few donations for terminal grounds anywhere, and this strip in Spokane was just a narrow 60-foot strip; we had to purchase our terminals outside of that.

Q. It went right through the city, though, didn't it, except for that break?

A. It went through a considerable part of it, yes.

Q. Spokane was pretty poor then, wasn't it?

A. I guess they weren't very flush at that time—those were hard times, but they wanted a railroad pretty badly in order to make them flush.

Q. On page 15 there is a statement headed "Right-of-way and station grounds on lines under construction," and there is a column entitled "Acres," and another one entitled "Average value per acre." Do the values that you have out to the right there represent the actual purchase of land?

A. They do in a great many cases; they do on the line from Greenbush to Warroad.

Q. You actually paid there $31.21 an acre?

A. We actually paid $23,000 for the amount we obtained there; that makes an average of $31.21.

Q. That is what I mean.

Q. Now, in the next one, in Montana, Judith Gap to Laurel?

A. Judith Gap to Laurel—that is somewhat greater than the actual, because the lands have appreciated very much since we bought the line, and I added something to that for increase in valuation.

Q. That is $44.61 per acre?

A. Yes, $44.61; that is correct.

Q. Now take it in Washington, the Wenatchee North Line, $111.34 per acre.

A. That is the actual cost.

Q. And the Waterville line, $36.48 per acre.

A. Yes, sir. On those two lines that is only a portion of the right-of-way; we have not acquired all of it yet.

Q. I understand that is what the right-of-way cost per acre, of this acreage?

A. So far, yes, sir.

Q. Now you have got below that the Vancouver, Victoria & Eastern Railway & Navigation Company, which foots up over a thousand acres of right-of-way, at $104.64 per acre.

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A. Yes, sir; that is actual cost of that right-of-way there.

Q. Then you have a total there of 4,210.43 acres, averaging $61.43, covering rights-of-way in British Columbia, in the state of Washington, the state of Montana and the state of Minnesota, averaging, actual cost—as I understand it, recent purchases—

A. Yes, sir.

Q. —$61.43.

A. That is correct. I will state here that this right-of-way average is the value outside of any city. We don't run through any cities or towns on those lines.

Q. I understand; I am eliminating the terminal situation there.

A. And also the station grounds in the smaller towns.

Q. Have you any idea what your right-of-way would average irrespective of station grounds, now that we have got the terminals out of the road? I mean the large terminals.

A. No, I wouldn't have any idea, Mr. Teal, without making a very exhaustive estimate again.

Q. There is no other place in that statement, is there, except in connection, I think you said, with the Canadian lines, that actually represents what you have recently paid for right-of-way?

A. No, I think not. The most of our lines are comparatively old and they have been in operation for several years and the country has increased in value by reason of the road being in there.

By Mr. Wimbish:

Q. I notice that you value your St. Paul terminal property at $22,709 an acre.

A. That is what the average is, yes.

Q. And the Minneapolis acreage at $36.168. Are those properties located relatively as well in one city as in the other?

A. Well, I should say Minneapolis had the greater area of more valuable property. You see, in St. Paul we come down what is called the Trout Brook valley, a narrow ravine, and turn around a corner (almost) into the Union Depot. It is just that little piece of ground from the Union Depot up to Seventh street that has any very great value.

Q. Then, your properties in St. Paul are not worth, relativell, as much as they are in Minneapolis?

A. They haven't got the acreage of good property that

they have at Minneapolis. That accounts for the difference in valuation.

By Mr. Teal:

Q. In connection with the various terminals that you have valued there, is it or is it not a fact that in any cases or in any considerable number of cases you have acquired lands for future use that are not now in railroad use at all?

A. Well, we do from time to time acquire lands that are not for immediate use, but are secured for use in the near future. We do not acquire them a long way ahead.

Q. Is that the fact running through that list?

A. That entire list, yes, sir.

Q. Didn't you have Winnipeg in there?

A. Winnipeg is in there.

Q. You have no line of road to Winnipeg at all?

A. We have a line surveyed up there now and have been acquiring station grounds there recently, with the idea of building up in there. At the present time there is no line up there. To get in there we run over the Canadian-Northern.

By Mr. Wimbish:

Q. How about your Duluth terminals? Is the property there more valuable than in St. Paul?

A. Well, Duluth is peculiarly situated. There is a very high bluff there, right close to the lake, making a very narrow ledge of property than can be utilized by railroads of any kind, and all the commercial business is along the main streets and the railroads are crowded in between the foot of the bluff and the lake, making a very narrow strip of land that can be used for first-class property of any kind, and that is why the valuation is high in Duluth. We have a considerable amount of that along the water-front which is very valuable.

Q. Why is it that your average value per acre for right-of-way in South Dakota and in North Dakota is so much greater than in Minnesota and Wisconsin?

A. I think the reason is that we run through a greater number of very considerable towns, and especially in South Dakota. We have a short mileage there, and we run through the towns of Sioux Falls, Yankton, Aberdeen, and Huron, and they are all very considerable towns.

Q. Generally that is the reason you assign?

A. Yes. It is the town property that increases the value of the whole?

By Mr. Walter:

Q. Does the Great Northern have a land company?

A. They do not.

Q. About how much of their land grant is still left?
A. I really don't know. There isn't a great deal of it.
Q. Something like 800,000 acres?
A. I should think in round numbers about that. That is just an estimate of my own. It is less than a million acres, I should say.

Re-direct Examination.

By Mr. Holden:
Q. Mr. Hayden, generally speaking, how is the Great Northern located in these different towns and villages through which it passes with reference to the center or the business part of such places?
A. In almost every case it occupies the central part of the towns or the villages, for the reason that the village has sprung up around the railroad since it was constructed; that is, when we first built in there, there was no town. When we located our station, the town was platted with reference to that station, and the business grew up immediately around the location of the depot itself. In a great many cases, on the older lines, and on some of the newer lines, the main streets are laid out parallel with the right-of-way, and the stores and banks and hotels and the main business of the town are right along, facing our right-of-way.
Q. You spoke about the terminal at Winnipeg and the fact that there has been a line surveyed and some station grounds have been acquired for that purpose. You also said that you were now operating into Winnipeg over the Canadian-Northern.
A. That is my understanding of it. We have a traffic arrangement with them to get to Winnipeg station.
Q. So that the Great Northern system is operating and putting traffic into and taking traffic out of Winnipeg over that line?
A. Yes, sir.
Q. It is engaging in the Winnipeg traffic at the present time?
A. Yes, sir.
Q. And has been for some time?
A. Yes, sir.
Q. Turning to page 15 again, where you have shown average value per acre of various rights-of-way and station grounds on lines under construction: Greenbush to Warroad,

in Minnesota, shows an average value of $31 plus per acre. Where is that located in the state?

A. That is up in the northern part of the state. The line runs from Greenbush to—

Q. I mean just generally now. It is away up in the northern part of the state?

A. It is in the extreme northern part of the state.

Q. How are values up there with reference to other portion of the state further south?

A. The land values are not high up there; it is swampy land, most of it, and the land values are comparatively low.

Q. And if I understand you, generally speaking, on this table the prices shown are exclusive of station grounds and terminal grounds?

A. Well, they include the station grounds, but in a great many cases in these lines there are no towns there; just simply a widening of the right-of-way for future station grounds when the business develops.

Q. There is provision there for a future town if one comes?

A. Yes.

Q. But it is a mere widening of the rural right-of-way?

A. Yes, sir.

Q. There is no element of substantial value in any of the station grounds thus laid out?

A. No more than there would be in the ordinary right-of-way.

Q. In any of your figures here have you taken into consideration any of the ore lands?

A. No, sir.

Q. Has there been any value added in any of your figures because of any ore lands that may be adjacent to the right-of-way?

A. No, sir, the ore lands have not been considered in any way in this estimate.

Q. No element of value has been injected into the figures because surrounding the right-of-way there may be ore properties?

A. No, sir.

Q. Now, you spoke about some of the records and in reference particularly to the consideration shown in deeds. What has been and is the practice in acquiring property by deed? Does the consideration always show the actual price paid?

A. It does not always show, no. There may be reasons why it is not considered advisable to show the true consider-

ation in a deed. It might affect subsequent purchases of other property in the same neighborhood, for instance, and quite a number of our deeds are taken for $1.00 consideration, where they may show a different consideration from what was actually paid.

Q. So in cases of ancient or long-time-ago purchases, where you have merely a record of the consideration in the deed, so far as you know, are you able to tell whether or not, with any degree of reliability, that represents what was paid? Of course in the case of a nominal consideration, I suppose it would obviously not be the actual payment; but what is your opinion on that general matter, as to whether the consideration shown in old deeds, in the early right-of-way purchases, would be any substantial guide in determining what was actually paid for the lands covered by those deeds?

A. Of course, I don't know, because that was before my time.

Q. Certainly.

A. But I should not take it for granted that that was the actual consideration.

Q. It might or might not be?

A. It might or might not be.

Q. I simply want to elicit the fact, because, as I understand it, it leaves the matter in a totally uncertain condition. Now, in reference to the right-of-way over Indian reservations, for instance. Was that right-of-way acquired without payment, or what has been the fact in that regard, generally speaking?

Q. In the Indian reservations we have to get special acts to allow us to go through the reservation—to build through, and before anything is done in the way of grading we have to settle with those Indians through the Indian agents, and where the land has been allotted in severalty we have to pay the individual Indian for the damage done, just the same as we would pay a settler outside of the reservation; and where the land has not been allotted, we pay the Indians as a tribe, pay them tribal damages, so much an acre. Now you take the Indian reservation through Montana. We built what we call the Montana extension, running from Minot, in North Dakota, to Great Falls. We ran through 400 miles of Indian reservation—the Fort Peck reservation and the Fort Belknap reservation (the Blackfoot Indians and others) and we paid there, in addition to some incidental damages to individuals, at the rate of 50 cents an acre right straight through,

and in all justice that land was not worth to anybody more than 50 cents an acre.

Q. That was at what time?

A. That was in 1887.

Q. Now, merely to illustrate a comparison between actual prices paid and the price contained in your statement, the committee of St. Paul real estate men returned, as my information is, a price per square foot for the Great Northern terminal land right contiguous to the Union Depot property, and also returned the Union Depot property at $8 per square foot. Is that correct?

A. That is correct, yes, sir.

Q. Has the Great Northern, in any recent period, purchased any land adjoining that property, and, if so, what rate per square foot did you have to pay?

A. They did purchase some property there outside, and that is the purchase which I stated Mr. Oscar L. Taylor had to do with as a real estate broker, acting for us in that particular deal. That is the property known as the Kelly building, on the corner of Sibley and Third streets, and also the buildings occupied by the St. Paul Rubber Company and Fairbanks, Morse & Company. It is the block of buildings running through from Sibley to Wacouta on the south side of Third street. The actual price paid for that property was $416,264, and taking the number of square feet in the property it amounted to $9.75 per square foot.

Q. Now, you spoke about having made some recent purchases in Duluth. Will you illustrate or state what the fact is in that vicinity, as to what you had to pay as compared with the figure you have shown as your valuation in Duluth?

A. We had to acquire an approach to the elevated trestle of our road on Rices Point, near the end of the Northern Pacific bridge across the bay to Superior, and extending up to what they call the Duluth-Superior bridge—that Cantilever bridge across the bay. We paid the lumber company for a portion of their property, near their mill, at the rate of 30 cents per square foot. That is about $12,000 an acre. And I have that same property in my estimate, taking it all through on Rices Point, at $9,000. We paid the Duluth Land & Warehouse Company, several years ago, at the rate of about $11,000 for small tracts of land.

Q. Going back up the Greenbush line for an illustration of the country: do you recall sales made up there of some of the townsites at public auction?

A. The land on which the town of Greenbush is now lo-

cated—that was the end of the line for a number of years after we began operating—that land was owned by the state of Minnesota and sold at public auction for about $23 per acre. But that was a high price for land in that neighborhood, because it is mostly swamp land up through there.

Q. What effect on a piece of land does the knowledge that it is available or desired or in demand for railroad purposes, have on the price that has to be paid for land of that kind?

A. It is my experience that it raises the value very fast and very rapidly and very excessively over what it could be purchased for for other purposes. They seem to consider that railroad use is the highest use to which land can be put, or at least the necessities of a railroad company make them demand prices that they could not get from anybody else. Do I understand your question?

Q. Has there been a recent case here in the vicinity of St. Paul which would illustrate the point—a condemnation case?

Mr. Teal: Mention the case to him.

Mr. Holden: I can't mention it myself. I know where it is, but I don't know what it is. If you know the facts you may state them.

A. I do not know enough of the facts to give you an intelligent answer as to the prices paid, because I have not gone into it.

Mr. Walter: As a matter of fact, the land they are trying to condemn belongs to another railroad, doesn't it, and that is the reason the price goes up so high?

The Witness: No, the tract they condemned belonged to private individuals.

Mr. Walter: I understand it belongs to another railroad that does not want this company to get it.

Mr. Holden: No, your information is wrong.

By Mr. Teal:

Q. You spoke of a block down here, where you paid $9.73 per square foot.

A. That is what it averaged, yes, sir.

Q. Did I understand you to say that that block was covered with brick buildings?

A. It has four story buildings on there now—brick buildings.

Q. And was occupied and in use at the time?

A. Yes, sir.

Q. And the land adjacent thereto that was valued on the

same basis by the railroad, was valued without respect to improvements, was it not?

A. It was valued as bare land by the real estate men at $8. I have added to that 25 per cent, which made it $10, for value of improvements and anything that had to be destroyed or removed for the purpose of getting the property in shape for railroad purposes.

Q. And if you had reduced this $9.73 to the bare land value, how much would you have paid for it? In other words, how much were the buildings worth?

A. You can't figure that way, because if you figure the value of the buildings it is only what you would get for salvage, the building torn down, because the buildings are more valuable as they stand, for commercial purposes than for anything else.

Q. If some one else was buying it they would buy the buildings, wouldn't they

A. We bought it through an outside party.

Q. At any rate it is covered with a block of buildings?

A. Yes, sir.

Q. Now, there is one thing I want to get definite; of course I know it is not done for any purpose, but each time any definite information is tried to be secured, I find that the questions are asked, then it apparently becomes impossible to get any definite information. Now, I asked you, in connection with the Seattle property, if you did not think your books would show the actual price that you had paid for your terminals there. You told me you thought they would.

A. Well, I think they will, that is, as far as the cost is concerned.

Q. On re-direct examination you were asked if the deeds showed the actual cost, the actual purchase, and therefore if they didn't everybody would be at sea again.

Mr. Holden: I think you and Mr. Walter were both asleep at that time; I was talking about St. Paul.

Q. Well, I wasn't talking about St. Paul. So we won't misunderstand each other; if the books—not deeds—of the Great Northern Railway Company, or whoever purchased that land for the Great Northern Railway Company, showed the actual cost of the Seattle terminals. That is what I mean.

A. I think they will, and I will tell you why: that is a comparatively recent purchase, from 1892 up. What Mr. Holden was asking about was away back in the early days, and that is a very different thing.

Q. I want to get the Seattle actual purchases.

A. I think we can get the actual cost there.

By Mr. Holden:

Q. Generally speaking, are all of the records that are available and all of the details upon which you have worked in making up these figures, open for examination and inspection by the gentlemen on the other side of this case, to the fullest extent they may wish?

A. Surely.

Q. From Minot, North Dakota, to the Montana state line, I understand you paid 50 cents an acre for the right-of-way.

A. Not at Minot. That was in Montana. I said the line was built from Minot, but the reservation I speak of started from the Montana line and went over to—

Q. Do you remember what you paid from Minot to the state line?

A. We got considerable of that by act of Congress.

Q. Most of it you didn't pay anything at all for; it was public land, wasn't it?

A. We got a great deal of it from the public land grant.

Q. And it is in your list at $350 an acre?

A. Yes; that is the present value of farm lands through there.

Mr. Holden: If your Honor please, after consultation, in view of the various lines interested having headquarters at various places, we have agreed, with your consent, to resume the hearing at Chicago, on Friday, April 23.

(An adjournment was thereupon taken until the morning of Friday, April 23, 1909, at 10 o'clock, at the office of the United States Marshal, in the Federal Building, Chicago, Ill.)

Room 628 Federal Bldg., Chicago, Ill.
Friday, April 23, 1909.

The taking of testimony was resumed before the Special Master, Hon. Frederick N. Dickson, at the above time and place.

Present:

On behalf of the Complainants, Mr. Hale Holden, Mr. F. C. Dillard, and Mr. Charles Donnelly;

On behalf of the Defendant, Mr. Luther M. Walter, Mr. J. N. Teal, and Mr. W. A. Wimbish.

J. A. MUNROE, being duly sworn as a witness on behalf of the Complainants, testified as follows:

Direct Examination.

By Mr. Dillard:

Q. Where is your home, Mr. Munroe?

A. Omaha.

Q. What is your business?

A. Freight traffic manager of the Union Pacific.

Q. What experience have you had in railway work? I won't be mean enough to ask you how old you are.

A. I have been actively engaged in it on the Union Pacific lines since 1882.

Q. What positions have you occupied on the Union Pacific lines in that time? Just in a general way, Mr. Munroe.

A. Assistant general freight agent, general freight agent, and freight traffic manager.

Q. Had you had any experience with other railroads prior to that time?

A. I had.

Q. State what it was, please.

A. I was general agent of the C. St. P. M. & O. Railway at Omaha, in 1881, and I was afterwards assistant traffic manager of that line at Minneapolis, in 1882.

Q. What years were you at Minneapolis, Mr. Munroe?

A. 1882.

Q. Just for that year alone?

A. That is right; only a portion of that year.

Q. And you were how long with those roads—1881 and 1882?

A. Yes, sir.

Q. The Union Pacific Railway extends where?

A. From Council Bluffs and Omaha to Ogden, Utah, with various lines in Kansas and Nebraska, and also from Kansas City to Denver.

Q. You connect with the O. R. & N. and the O. S. L.?

A. At Granger and Huntington, respectively.

Q. Are you quite familiar with the traffic conditions on the O. S. L., O. R. & N. and Union Pacific?

A. More especially on the Union Pacific; and generally speaking as to the O. S. L. and O. R. & N.

Q The relationship between the three lines is of such character that your duties demand intimate familiarity with all affairs of the Union Pacific and quite close intimacy with the traffic affairs of the other related lines, do they not?

A. They do.

Q. Did you ever, at any time, have direct control and jurisdiction of the O. R. & N. and the O. S. L.?

A. Yes, I had; I was one of the officers of the three properties for quite a while.

Q. When was that?

A. It was from 1886 to 1893.

Q. Now, Mr. Munroe, I shall presently desire to go somewhat into the history of these lumber rates, somewhat into the movement of lumber, but before I do that I wish you would please take the Table 5. Have you that book?

A. No, I have not.

A book was handed to the witness.

Q. Table 5 in the Abstract of Evidence which you have in your hand. That table is copied from an exhibit which was introduced in the trial before the Commission by Mr. W. H. Anderson, testifying in behalf of the complainants, and I presume somewhat in the nature of a rate expert—was, he, Mr. Teal?

Mr. Teal: He was simply making a statement on behalf of the Interstate Commerce Commission.

Q. Then, simply making those statements. I find, first, under the table you have in your hand, a comparison of rates between Argyle, Georgia, 1013 miles, and Chicago, Illinois, and next a comparison between Albany, Oregon, and Opal, Wyoming, a distance of 1000 miles of the two rates, and a per ton per mile comparison. I will ask you to state whether or not, from a traffic point of view or any point of view which should enter into the making of a rate, the comparison there made by Mr. Anderson is a fair one or one which can justly

be used to throw any light on the propriety of the rate made eastward from the point in Oregon—Albany; if it is a fair and just comparison, simply so state, without more; if it is not, please explain in your own manner and quite distinctly so that people who are not particularly versed in traffic may understand the impropriety of the comparison?

A. Well, I think no significance attaches at all, from a traffic standpoint, to the comparison. I think so for this reason: the circumstances and conditions are entirely dissimilar. Chicago is, or was in years gone by, a large consumer of lumber. It had a very large lumber district here—in fact one of the features of the city. It was used as a dumping ground for surplus lumber from all regions round about here. Georgia pine, always regarded as a superior lumber for flooring, particularly in the east, naturally found more or less of a market here. The conditions here were exceptional. The lumber was supplied quite largely from schooners coming in here from Lake Michigan and from Green Bay ports, both Wisconsin and Michigan origin, and it was a large consuming center at that time, especially for a few years following the fire. Now, as to Opal, Wyoming, there really is nothing there, more or less, than the side track. The 40¢ comparison to Opal, in my judgment, is unfair; first, because there is no commercial consumption at Opal. It is simply an incident that it happens to fall in substantially the same mileage as quoted here from Argyle to Chicago. If Mr. Anderson, or whoever compiled these figures, wanted to be fair, instead of taking the minimum distance at the maximum rate, it would have been more natural, it seems to me, to at least have taken the average distance, at the average rate. The facts are, that this rate of 40 cents to Opal was simply a reflection by application to an intermediate point of the 40 cent rate current from the Pacific Northwest to Denver. When the rate was made, Opal never entered the minds of any of the makers of the tariff; nor was there any other business of moment intermediate between Opal and Denver. It was a question of going into the Denver market, and the application of the Denver rate so made, under the fourth section of the Interstate Commerce Law, to the intermediate points. Commercially, this comparison means to me absolutely nothing, and I cannot imagine how anybody seeking a fair adjustment would get any particular light from it.

Q. The comparison, then, was simply made by putting a ruler down somewhere in Georgia and finding another thousand

miles and making a per ton per mile comparison, without looking into any other conditions which should influence the rate?

A. I think so.

Q. Except distance. That would be indicated by the points there selected, would it?

A. It would.

Q. Does the statement which you have made apply to Fossil, Wyoming, and Granger, Wyoming, and Green River, Wyoming, and Point of Rocks, Wyoming, and Lava, Idaho, and Bancroft, Idaho and McCammon, Idaho?

A. Yes, sir.

Q. Take each of those places Fossil—what is it?

A. Fossil is simply a station for side track purposes on the Oregon Short Line. No community there, more than two or three houses possibly, of section men.

Q. Granger is something more; what of that?

A. Granger is the junction point between the Union Pacific and the Oregon Short Line rails, but notwithstanding that fact it is so small that the trains are operated to and from Green River, main line point, 30 miles east.

Q. Well, he has made a comparison with Green River. How much business is done at Green River?

A. A very small amount of business. Green River is a district terminal on the Union Pacific, a small point in Wyoming, of a few hundred population.

Q. Now Point of Rocks?

A. That is—

Q. About what its name implies, isn't it? That is another point similar in character?

A. Were it not for the necessity of the railroad having a side track for meeting and passing trains, there would be no Point of Rocks.

Q. Lava?

A. Lava is similar.

Q. Now Pocatello and McCammon are two very good points, are they not?

A. McCammon is not much of a point. Pocatello is quite a good point.

Q. At these points—Opal, Fossil, Granger, Point of Rocks, Lava, Bancroft—there is no competition there of any kind, is there?

A. Local and insignificant business in all lines. Insignificant in volume, I mean—very, very small.

Q. Now, Mr. Munroe, I shall presently come to discuss the

question of the movement of lumber from various points, but before doing that, and while it is in my mind, you stated that at one time there was some movement of lumber from the Southeast and Georgia into Chicago. At the present time, is it not a fact that lumber from Florida, Georgia and Mississippi does not move in appreciable quantities to Chicago but that such yellow pine as comes here comes from west of the Mississippi river?

A. That is my understanding.

Q. That is your understanding?

A. The Chicago lumber market has practically ceased to be a factor, here in Chicago, as we all know. The business is nowhere near the volume what it was twenty-five years ago.

Q. You stated that you were connected with some of the lines in Minnesota and Wisconsin, in the white pine district, as early as 1881 and 1882, and then went to the lines with which you are now connected. I wish in your own way, at such length as may be necessary, and so that it may clearly appear, you would now state the movement of lumber in those early days, say to St. Louis, likewise to Missouri river points and into Kansas and Nebraska; what was the source of supply, what rates in that time were made as to yellow pine and fir lumber, how such rates came to be made, whether there was any movement of yellow pine and fir, appreciably, to the points I have named, when the movement of those two lumbers began to improve and became considerable. In a word, I desire a history of the lumber movement and rates from the earlier days until such time as the lumber from the Pacific Northwest became a factor in the territory to which I have referred.

A. Generally speaking, for the fifteen years prior to and including 1895, the Missouri river, Nebraska and Kansas got substantially all their lumber from the white pine districts of Wisconsin, Minnesota and Michigan, respectively. When I went to Omaha, in 1881, we started what we called a lumber line, and the C. St. P. M. & O. was the first road to build box cars capable of carrying two length of 16 foot lumber. It was impressed very forcibly upon us, as our president (H. H. Porter) was the first one in this country to adopt the plan of putting on the outside of the box cars the full name of the road, and the question arose as to whether the side of the box car was large enough to take the name "Chicago, St. Paul, Minneapolis & Omaha." Well, we finally got it on one side, and put "Lumber Line" on the other, and we worked up a very large traffic from St. Paul and Minneapolis as basic points,

the interior white pine points in Wisconsin taking differential points higher, to Sioux City, Council Bluffs, Omaha, Atchson, St. Joe, Leavenworth, Kansas City and points generally west thereof in Nebraska and Kansas and even to Colorado. Our principal competition at that time was lumber similar in character which moved through the Chicago lumber district to which I have referred. There was always the strongest kind of competition in those days between Chicago, on the one hand, and the primary points in Wisconsin, Minnesota, and that region, on the other; and in addition to that, large quantities of lumber moved in the log from points on the Wisconsin and Chippewa rivers to the Mississippi river, were floated down the river in rafts, and commenced stopping some at Dubuque, more at Clinton. Rock Island was a very important point; Hannibal was, and St. Louis; and there was also at that time a very large traffic in shingles. We never heard in those days of the Pacific coast lumber to any marked degree, nor did we hear of it until subsequent to 1895. There were slight rumblings about it in 1895, but the movement was comparatively small. The fir lumber was unknown, and the competition in the white pine was such, and there was such a surplus of it, that the dealers in that section continued to buy from the east. As time went on the supply became very much exhausted. All these points on the Mississippi river practically dropped out, and the Pacific Northwest at first took practically all of the shingle traffic. Later they became a very much stronger factor on the pine lumber and also the fir. But in the meantime we had a new factor in the field, as to lumber of Missouri—Arkansas origin,—and also Texas and Louisiana. The competition on that was very keen, particularly at Kansas City, and a nominal differential obtained at that time to Omaha above Kansas City. The Southern people always contended that their lumber weighed more per thousand feet, and therefore a lower rate per ton per mile was necessary in order to market it, and all sorts of rates were made at that time. Finally the whole question as to what differences should obtain, went to arbitration, and in the meantime the white pine was dropping out, from natural causes, and later ceased almost entirely to be a factor. That left very largely the market to the southern material, and to-day the southern lumber is a strong factor along the Missouri river, but losing its hold gradually as against the western product; and the only reason that we can see, from our standpoint, why there is not more western lumber coming in, is because they have a better market across the

water, in foreign lands, than they can get just at this time in Kansas and Nebraska; and there is a certain amount of southern lumber that is going out all the time, either direct or through the jobbing points on the river, but it is gradually changing, and in my judgment the time is not far distant when the Pacific coast will do a very much larger proportion of the business than they are doing to-day, and that, too, from causes entirely foreign to and quite beyond the power of a freight rate to change.

Q. In those days concerning which you have been testifying to, were logs floated in the raft to St. Louis and there cut?

A. They were very largely to the points north of St. Louis, and I think also to St. Louis, and lumber was also floated in the raft. Originally the log, and into the lumber. The river was used at that time, though, very actively for transportation of the lumber and the log.

Q. In order that there should be any computation at all of the lumber from the northwest, and the yellow pine lumber from the yellow pine district, in the territory that you have described, what was necessary to be done with regard to the rates from those two points, and as a matter of fact, what was done?

A. Well, the rates were extremely low. The southern pine met the northern product very largely on the Missouri river, and that section was used as a dumping ground for the southern mills; and when you say Missouri river, you ought to automatically say Nebraska and Kansas.

Q. When you say the southern pine met the northern product very largely, what do you mean by the words "very largely"? Not in very large quantities in those days do you?

A. The northern pine, as I have before stated, had a practical monopoly of the market prior to 1895. From that time on it steadily diminished, and the southern lumber increased right along.

Q. Those rates, then, in your judgment, that were established for yellow pine, were exceedingly low rates?

A. They were.

Q. The same is true of the rates that were established for fir lumber?

A. That is true.

Q. The floating of logs down, and the floating of lumber down as low as St. Louis also had what effect upon the rates of that day from the white pine district,—the rail rates?

A. It was one of the controlling factors. We were confronted with this situation: on the C., St. P. M. & O. at that time we had large lumber interests at a place in Wisconsin called Eau Claire, 88 miles south of St. Paul. The question was whether the logs should be converted there into lumber, transported by rail to Omaha, or floated down the river in the log, sawed at Clinton, Iowa, and Rock Island, and reach Omaha by the Rock Island. That brought about this discussion—what we called the Bogue war—and the decision reached was—I am speaking now from memory—that Eau Claire should take a differential of 2 cents per hundred above the Chicago rates, and that obtained for a number of years, and seemingly was satisfactory to the Eau Claire interests, and also to the interests along the Mississippi river, who got their supply in the log from the north by floating it down the river in the rafts.

Q. Then, if I follow you rightly, when the chief and almost only source of supply was the white pine country, the rail rates were made low from there by reason of water carriage?

A. They were.

Q. And yellow pine and Oregon fir and Washington fir,—Washington lumber,—finding those low rates made for white pine necessarily had to have an exceedingly low rate applied to them so that they could compete at all?

A. That is true. It should be stated there that—

Q. Now, one other question before you leave that point. You referred to the competition between the Eau Claire district and Chicago?

A. Yes.

Q. The rates into Chicago from the white pine country were also affected by water, were they not,—water movement—the lake movement?

A. Oh, controlled by it.

Q. Controlled by it. Now I wish, Mr. Munroe, that you would explain a little bit fully what you mean by stating that the rates to Chicago from the white pine district in those days were controlled by water. State what sort of rate the schooners make?

A. Why, the bulk of the lumber came to Chicago in those days by schooner from points on Lake Michigan and Green Bay, and the rates varied from 50 cents a thousand, perhaps, to a dollar and a half a thousand,—maybe at times they got more,—and these schooners used to come down here in large

numbers and go to the lumber district and unload and discharge their cargoes, and we used to put, in those days, train loads of empties in there, and they would send this lumber west to yards controlled in the west by parties identified with the Chicago lumber district; and these rates also were a determining factor, as made from Chicago for the rates from the Mississippi river. So that the water competition starting at Chicago virtually was the factor controlling all rates on all lumber to Missouri river points from the points in the north direct.

Q. Your memory is that the rate at that time was 50 cents per thousand feet?

A. Fifty cents per thousand feet from the nearby points, up to the higher rate as they got up along Green Bay, Oconto, Marinette, and that country.

Q. That does not include the handling to and from the boat?

A. No.

Q. But just simply the actual carriage on the water?

A. That is it, ship's charge.

Q. At the time that these lumber rates were raised, what is your judgment as to whether the pre-existing rates were reasonable or unreasonable, or too low?

A. You refer now to the rates from the west?

Q. I refer to the rates from the west?

A. The 40-cent rate?

Q. The 40-cent rate to St. Paul, and our rate to Omaha?

Mr. Teal: Let us get this defined. If this witness is testifying about the Northern Pacific road, let us know what he knows about it, and their traffic, so as not to confuse this. I would like to know just which road he is testifying about—what point?

Mr. Dillard: We are testifying about every rate from that western country.

Mr. Teal: And over every road?

Mr. Dillard: As to the reasonableness of the rates.

Mr. Teal: That is what I want to know.

Mr. Dillard: I will refer particularly to the Missouri river rate.

Q. Mr. Munroe, I shall confine your examination for the present simply to the Union Pacific rate,—the rates over the Union Pacific lines. Now, the rate was raised and became effective November 1, 1907. The rate that you carried to

Missouri river points prior to that time, in your judgment, was it a reasonable rate, or was it a low rate and an unreasonably low rate?

A. Unreasonably low, in my judgment.

Q. You had carried that low rate to meet the competition to which you have referred in times past, had you?

A. Yes. That rate was a reflection to Omaha and Sioux City on the 40-cent rate as established by the northern lines to St. Paul. We always felt that the differential of 5 cents obtaining at the lower points above St. Paul was too low. We recognized that the conditions might be, and doubtless were, different at St. Paul and Minneapolis from what they were at Omaha. I speak of Omaha as the typical point. We were getting at that time a large amount of lumber from points near St. Paul and Minneapolis, which were primarily in the forests up there, and we never got less than 10 cents a hundred for the St. Paul-Omaha service. Therefore we felt that if 10 cents would meet the commercial conditions at Omaha on St. Paul lumber, there was no reason why that difference would not meet them on Pacific coast lumber, as compared with the rate over the northern lines of 40 cents to St. Paul; but we finally compromised, as I recall it, on a 45-cent rate, which made the rate, we always thought, unduly and unreasonably low from the west, and we felt that it was the best settlement, however, we could make of that proposition at that time.

Q. What were the conditions that led to the raising of the rate, as shown by the tariff effective November 1, 1907, and why was the rate raised?

A. The general increase in the cost of conducting transportation, the odious comparison made between rates abnormally low, and what we contended to be abnormally high; the change in commercial conditions, and every other factor entering into the lumber problem, was on a higher plane than the railroad rate. Everything we had to buy was going up. Everything we had to sell, in the way of transportation, was going down, and we felt that we were entitled to better revenue on it, and that we could get it without hampering, or injuring, or unduly discriminating against any person or locality.

Q. Did not the depletion of the white pine forests enable you to raise the rate to nearer what you concede to be reasonable compensation for the movement of lumber, without

injustice, in your judgment, to the lumber producer of the northwest?

A. It did.

Q. Returning, Mr. Munroe, to Mr. Anderson's thousand mile comparisons: in making a lumber rate, can you simply lay down a thousand miles between all points and make the rate accordingly?

A. Certainly not.

Q. I wish you would simply state, in a general way, offhand, some of the factors that occur to you that should be considered in the making of a lumber rate from various points of production. Upon what would you act?

A. Of course you have to consider the distance; the service rendered by the carrier. You have to consider the consuming market; determine, as near as you can, what rate, fair and just to yourself, will be fair and just to the producer along your line, to enable him to meet in that market the competition from other sources of supply, foreign alike to you and to him. Then you have also got to bear in mind the car movement as between loads and empties; and if you have another traffic which will admit of your getting a return load, your ability to make a lower rate is correspondingly increased. This 40-cent rate referred to here at Opal, Wyoming, as I said, was simply an incident. It was the Denver rate. There was no traffic important in volume at points between Opal and Denver. It was made primarily to go into the Denver market. When we got at Denver we came in contact with local lumber from nearby points on the Rio Grande, in southern Colorado and in New Mexico, the rates on which ranged from 10 to 15, perhaps 17 cents, a hundred. We also came in contact with southern lumber, taking at that time a rate of substantially 35 cents, as I recall it, from such points as Arkadelphia, and also the Louisiana and Texas producing points. We also had a rate of 24 cents, I think it was, from the Missouri river, which obtained on such lumber as might move through those river gateways, occasionally more or less white pine,—very small; but when the rate started, there was quite a large amount of it. Today it has practically dropped entirely out. The lumber rate, the same as any other, is a co-operative one between the carrier and the producer and the consumer, with a view of expanding, as far as possible, the trade in general on terms on which each one will make a fair and reasonable profit and remain in the business.

Q. Now, to illustrate the possibility of making a mere distance scale and tariff, I might take the conditions at Chicago. What was your rate prior to the raise in the rates—what I mean by your rate is the rate through Omaha from the Northwest to Chicago?

A. You mean the rate from the Wisconsin pineries to Chicago?

Q. No. I haven't made myself clear.

A. From the Pacific coast northwest to Chicago.

Q. From Pacific coast, for instance, Portland, or some point of production, to Chicago, what was your rate at that time?

A. My recollection is it was about 10 cents higher than to St. Paul.

Q. Well, your rate to Omaha was 50 cents, wasn't it, at that time?

A. Well, we had 45 and 50.

Q. I mean immediately prior to the raise the rate to Omaha was 50, and to Chicago was 50?

A. Yes. That was brought about in this way: 10 cents higher than to St. Paul, which happened to fall in the "50" column, and that obtained at Omaha on certain lumber from the coast.

Q. St. Paul had a 40-cent rate, had it not?

A. It had.

Q. And there was a rate between St. Paul and Chicago of 10 cents, was there not?

A. Yes, sir.

Q. Forced down low by lake competition?

A. Yes.

Q. You then had to meet—that is, lumber moving over your line and from your points of production,—had to meet the 50-cent rate at Chicago, or those mills could never reach Chicago at all, could they?

A. That is true.

Q. Then in the making of a rate all those conditions must be taken into consideration, must they not?

A. They must.

Q. In the raising of these rates, you tried to give due heed to those, I presume, Mr. Munroe?

A. We did.

Q. And attempted to make a rate which was fair to the producers on your lines in the Northwest?

A. We did.

Cross-Examination by Mr. Teal.

Q. Mr. Munroe, do you remember when this lumber rate case was tried in Washington before the Interstate Commerce Commission?

A. Yes, sir.

Q. Where were you then?

A. I was at Washington at one of the hearings then; I was with the Union Pacific.

Q. And weren't you in Washington part of the time when this trial was going on?

A. Yes.

Q. Were you called as a witness in that case?

A. I think not.

Q. You don't remember whether you testified in that case or not?

Mr. Dillard: It is admitted he did not.

Mr. Teal: It is admitted he was in Washington and was not called as a witness?

Mr. Dillard: He was there during part of the hearing.

Mr. Teal: And was in the employ of this company at the time.

Mr. Dillard: He was in the employ of the railway, yes, and in the same position that he occupies now.

Mr. Teal: In the same position he occupies now.

The Witness: Yes.

Q. Mr. Munroe, at the time that these rates were advanced, effective November 1, 1907, was it, how long before that had this advance been considered and discussed?

A. Well, I couldn't give you any particular time, but we had talked about it off and on for perhaps a year, I should say.

Q. Who are "we"?

A. It had always been a current topic in our Omaha office about those lumber rates. I have heard them discussed more or less pro and con. It did not leave any indelible impression upon my mind, but personally I will say I have always hoped to live to see the day when we get what we term a respectable rate on lumber from the West to the Missouri river; and I have not hesitated to talk about it anywhere with anybody or in any way. I thought it was a proper topic to discuss.

Q. Was it discussed with other railroad traffic men in that same territory?

A. Not except in a general way. I don't recall any lumber conferences that I attended, or anything of that kind.

Q. Was it just a happen-so that the rates all went into effect the same day over all the same roads in a joint tariff?

A. Oh, no, I suppose not.

Q. Don't you know it was not a happen-so?

A. I am willing to admit that those rates are made by conference.

Q. Who between?

A. The interested parties.

Q. Who are the interested parties?

A. The Northern Pacific, Great Northern, Union Pacific, O. R. & N., Oregon Short Line.

Q. All railroads?

A. All railroads.

Q. Excuse me. You can answer the questions and then you can explain. All railroads. Those are the interested parties in the lumber rate?

A. Yes.

Q. Then the interested parties in the advance of this lumber rate, from your standpoint, are the railroads that you have mentioned engaged in the carrying of lumber from Pacific coast points to the Missouri river and the eastern territory?

A. They are some of the interested parties. They are the interested parties.

Q. Well, they are the interested parties you were talking about, aren't they?

A. Not alone.

Q. Who else was interested?

A. The dealers along the Missouri river are interested. The shippers in the pineries are interested, and the carriers, and the consumers generally are interested.

Q. Were all of these people—the consumers and the others you mentioned—called into these consultations when these rates were fixed?

A. I cannot speak as to the shippers, because I don't come in contact with them; but I can say that as far as the lines terminal are the Missouri river are concerned, that we did have more or less conference with what we term the trade, receiving the lumber, and that it was not our purpose, nor did we take any action without canvassing the matter pretty thoroughly in advance, and we took such pulsations as we

could, and we came to the conclusion which resulted in these rate changes which we sought to make effective on November 1, 1907.

Q. These conclusions that you reached and you made effective were the result of these conferences between the traffic managers of these various roads, which was finally promulgated by the Transcontinental Bureau in that tariff, was it not?

A. Yes.

Q. And that is the way the rate was made, and that is the way it was promulgated?

A. The rates are made by conference.

Q. Well, between these parties I speak of, the traffic managers of the road?

A. Yes. I say the traffic managers—I mean the traffic departments.

Q. The traffic departments?

A. Yes.

Q. You are familiar, are you not, with the movement of lumber over your own road?

A. Why, reasonably so.

Q. Have been for a long time, haven't you?

A. I have.

Q. You were with these roads before the merger of the Southern Pacific with the Union Pacific, weren't you?

A. I was.

Q. What was the rate from Willamette Valley points and Portland points to Denver before the merger?

A. I do not recollect, Mr. Teal.

Q. Well, it was the same as over the Union Pacific, wasn't it?

A. At that time I think the Southern Pacific lumber came out by way of Sacramento.

Q. A 40 cent rate, was it not?

A. That is my impression—40 cents.

Q. You competed from Denver, did you not? Willamette Valley lumber competed with the Washington fir and the other fir in Denver on a 40 cent rate?

A. Yes, came in competition with it.

Q. And at that time the Southern Pacific people would not turn you over any of that lumber to Portland, would they—give you the long haul?

A. I think it all came by way of their line to Ogden.

Q. And that was a very much longer mileage by way of Portland, wasn't it?

A. Yes.

Q. And they crossed three mountain ranges, didn't they, in getting to Denver?

A. Yes.

Q. And still they insisted on hauling the traffic, didn't they?

A. Yes.

Q. After the merger it was sent the other way, wasn't it?

A. Yes, it was.

Q. And the Sacramento gateway was closed?

A. Practically.

Q. Do you know the rate on shingles from San Francisco into Salt Lake?

A. No. I had an impression it was 50 cents, but I wouldn't want to testify.

Q. You don't know what the rate is on red wood shingles?

A. I don't recall. I think it was 50 cents, but I won't be sure.

Q. Do you know what the rates are from the Oregon points?

A. No, I don't recall. I don't keep in touch with those rates from the west of Salt Lake. If you will allow me I would like to say a little about this movement from the Willamette Valley via Ogden.

Q. Yes, sir. Say what you please.

A. And I may add incidentally that we hauled that lumber from Ogden to Denver for less money than we hauled Oregon lumber east of Granger. The Southern Pacific had a connection in the Rio Grande route from Ogden to Denver, and they had a basis via that line which was extremely and abnormally low; and, speaking from the standpoint of the Union Pacific and of the lumber traffic by itself, for Denver, from points in the Willamette Valley, we never had a regret at not getting a single pound of it. And had it not been for relations in general, as between the Union Pacific and the Southern Pacific, we would have stayed out of that business, because we never felt it yielded a proper return of profit, but we continued in it, and there was a limited—not very large—movement.

Q. Let me understand. You are not referring to the 40 cent rate to Denver from Portland as being unremunerative, are you?

A. I was referring to our 40 cent rate from Willamette Valley points via Sacramento and Ogden.

Q. Which is "our?" I don't know what you refer to when you say "our."

A. By "our" I was referring to the Union Pacific proper division for the east of Ogden service.

Q. Oh yes. East of Ogden. But still, as a matter of fact, you know it is so, don't you, that the Southern Pacific did haul the lumber that way?

A. Oh yes.

Q. And you could turn it over to the U. P. at Portland?

A. Yes. They took it by way of Ogden. I know that.

Q. Now, this Table that you were testifying about: that does not purport to show anything but simply a per ton per mile rate covering various distances, isn't that correct?

A. Practically so, yes. I haven't—

Q. That is all it pretends to show, isn't it?

A. I think so.

Q. Now, Mr. Munroe, you are very familiar with lumber rates. Do you say that those rates—I am speaking now of the old rates, not the advanced rates—

A. The 40 cent rate, you mean?

Q. Yes, the 40 cent basis—that those are the lowest per ton per mile rates on lumber?

A. No, I don't say so.

Q. No. I say you don't pretend to say that, do you?

A. I wouldn't say so, without a further examination. But may I add this: that when we get any rate per ton per mile where those 40 cent rates are, in slang parlance, we sit up and take notice.

Q. For many years you have gotten a higher rate per ton per mile over the Union Pacific rate on lumber than the Northern Pacific road, have you not,—taking your road to Omaha and theirs to St. Paul and to intermediate points? Have you ever examined into that?

A. Well, our distance to Omaha is substantially the same as at St. Paul, so that the application of a higher rate would prove that mathematically. I hadn't thought of it in that line before.

Q. Do you consider the advanced rates sufficiently remunerative, that were effective November 1, 1907, for hauling lumber?

A. I think there is some justification for them. I feel it is a very low rate even at the proposed advance.

Q. Still very low?

A. I think so.

Q. Will you keep on agitating that until you get another raise?

A. No; I think that represents about our maximum. Conditions might change. I can conceive a condition when we might have to have more money. I don't know.

Q. Out of lumber?

A. Possibly. But it is very unlikely; very unlikely.

Q. Taking the Northern Pacific road and the Union Pacific road, in a general way could you state whether or not the advanced rates over their road on lumber is remunerative?

A. I don't feel competent to testify as to their line.

Q. You don't feel competent. You have been over their road?

A. I have.

Q. You, of course, are familiar with the cost of operation on your road, and probably are with the Northern Pacific. Taking the percentage of cost of operation to gross earnings on both of the roads, which is operated at the lowest cost?

A. I can't testify on that; I don't know.

Q. Don't you know, Mr. Munroe, that the Union Pacific for the last year has been operated at the lowest cost of any railroad in America?

A. I know we have had a very low operating cost, but I don't know that it is the lowest of any road in the country.

Q. Don't you know it has been referred to as a marvel—

A. I know it has.

Q. —in the matter of the cost of operation?

A. Yes.

Q. Now, then, if, for instance, your old rates average higher than the advanced rates do on the Northern Pacific, would you still state that there was a justification for your advance?

A. I think there is justification for it.

Q. And you would still think that the old rates were unremunerative,—your old rates?

A. Yes, I think they are unremunerative. And I think our prosperity arises from causes practically foreign to the lumber movement, east bound, at those rates.

Q. What do you call a remunerative rate?

A. One which yields a fair excess above the cost of movement and contributes its fair share to an interest return on the investment to the owners.

Q. I think that is a very fair answer. Now, that being

true, do the lumber rates pay the cost of service, in your opinion?

A. I think we can handle it as a surplus proposition for filling out trains; otherwise, correspondingly light. If we had to move all of our traffic on these rates we could not live; but sandwich the lumber business in with our other business, I think they represent something in excess of the actual cost of the movement; but I do not consider that they contribute their fair share to the owners of the property.

Q. What you mean by that is that if you just hauled lumber alone you would not make the cost of operation?

A. I mean that, yes.

Q. Now, it is a fact, is it not, that the Union Pacifi's earnings has been very largely and constantly growing for a series of years?

A. They have been.

Q. Now, take, for instance, your east-bound rates on salmon, wool, hops, hides, canned goods: are they low or high rates?

A. Well, we regard all the rates on all Pacific coast products, east-bound, as low rates. Let me explain.

Q. Well, pardon me just before you go on. Are they remunerative rates?

A. We believe that we are justified in making them, and we keep them somewhere near in the same category, but not quite the same as lumber.

Q. But I say, are they remunerative?

A. We feel they contribute something in excess of the cost of the movement, but not properly.

Q. Now, let me ask you another question.

A. Now, let me explain why I think that.

Q. All right, go on.

A. It is very easy, of course, to take a rate, if you please, of a dollar on dried fruit as representative of the revenue the carriers get from a primary point in California or Oregon or Washington, to the Missouri river. Now, what do we do? We blanket that rate all over this eastern country. The lines west of the Missouri river pay out of the dollar rate the entire revenue accruing to the lines from the Missouri river, if you please, to the Atlantic seaboard. These rates are made on a general principle and often result in a very low rate per ton per mile on a commodity, leaving the impression in the minds of the public that it is high class. Let me illustrate: We have out of California about 30,000 carloads a year of citrus fruit, largely oranges, and some lemons. That traffic

represents in revenue to the line west of the Missouri river an earning of less than one cent per ton per mile. Now, to handle it, we have to furnish a car of special design, refrigator in character, costing, we will say, 50 per cent. more than an ordinary car. It is heavier. The product has to handled under ice. It moves at stated seasons in large quantities, and the result is we have an empty movement, west-bound, on a large portion of it. Now, the public would say that that is high class freight. They measure it by the price they pay for the oranges in the eastern market. Now, it is a fact, so I am told, that California oranges very frequently are available at a lower price in Chicago and New York, after having paid the rate, than they are at a point on the Pacific coast within 50 or 100 miles of the groves. Now, that rate starts with a rate on the foreign orange, from Messina, if you please. The dried fruit rate starts with the rate on raisins, from Malaga to New York, and these rates are made to place the Pacific coast product before the consumer in the far east at a price he can afford to pay, and to consume to the greatest extent he can. Now, that is the principle underlying the rates, and, accordingly, we have lower rates relatively on Pacific coast products than we have on any other class of traffic that we handle.

Q. Well, all of that is true, but the question that I was getting at—

A. So that all rates are very low, we think,—so consider.

Q. The question I was seeking an answer to is whether you consider your rates on canned goods, dried fruit, hops, hides, and other goods of that kind, remunerative rates?

A. I regard it desirable traffic under the conditions; and there is some remuneration, but not particular remunerative for a carrier.

Q. What is your unit of measure as to the result of transportation of goods? It is what you get out of your carload, isn't it? Isn't that the general unit you use?

A. It is the revenue, yes—the carload revenue and the ton revenue.

Q. That is what I mean. Now, then, did you ever take the trouble to figure out what your average carload revenue is, for lumber, as compared with these other articles that I have mentioned?

A. We have had those figures, yes.

Q. Now, do you think they will come out? Which will produce the greatest revenue to the company, per carload?

A. Per carload?

Q. I mean when it gets to Chicago, Omaha, New York; when it gets out to this country where these products go to?

A. I will illustrate that.

Q. Can't you answer it and then illustrate it?

A. I think the lumber does not yield as good revenue as the other commodities.

Q. Now, you have had that figured; and you are speaking either from guess work or memory.

A. I am speaking based on some illustrations I have in my mind. I will just give you one for illustration.

Q. All right.

A. The lowest commodity rate which occurs to me, which we have from the Pacific coast to the Missouri river on other than lumber, is sugar.

Q. I did not have sugar in my mind at all.

A. Now, sugar yields us 50 cents a hundred; and it is not at all impossible or uncommon to get 80,000 pounds. 60,000 is the common load. Now, we will say 60,000, for illustration. There would be $300 a car. Now, we will consider lumber. I don't suppose your average load on lumber would be more than 27½ tons as a maximum.

Q. Then you are not familiar with the testimony that the railroads put in in this case, as to loading, are you?

A. I don't know how they are loading.

Q. Well, just fix your figures as you want them, as to the loading capacity on your road.

A. I would say offhand that I don't think our lumber averages over 27½ tons per car.

Q. About 54,000 or 55,000 pounds?

A. About 55,000 pounds would be about it. I think that is the way our lumber runs; I would want to verify it.

Q. That is all right. It is close enough, anyhow, for the illustration.

A. So I consider that lumber is a very low return of revenue to the carrier.

Q. Now, take it with dried fruit, wool, hops, in every one of those instances there has to be special cars, has there not? I mean box cars?

A Oh, yes.

Q. Lumber is loaded on any old car, isn't it,—flat cars as well as box cars? There is no selection of equipment?

A. No, sir.

Q. And a carload of lumber is not worth anything like a carload of hops?

A. No.

Q. Nor a carload of salmon?
A. Worth very much less.
Q. Nor a carload of wool?
A. True.
Q. The risk is infinitely greater, isn't it?
A. The value of the article transported is very much greater than it is on lumber.
Q. All of those features, of course, enter into the question of rate, don't they?
A. Yes, they would have to be considered.
Q. You have to consider that?
A. Yes, certainly.
Q. The insurance problem must be considered all the time?
A. Yes.
Q. In the movement of hops and wool and cement and articles of that kind, when you get them on a train, ordinarily speaking, commodities of that kind have to be kept moving, do they not? I mean by that that is the customary course?
A. Continuous movement, yes.
Q. That is not true of lumber, is it? You can send out a lumber car when you want to, can't you?
A. Well, we don't ever intend to—
Q. Well, you don't try to, but—
A. I will answer your question. We do not regard lumber as time freight—
Q. That is what I mean.
A. —to the extent we do salmon, or wool, or the higher priced commodities.
Q. That also enters into the question of rate making, doesn't it?
A. Well, it—
Q. Just a little bit—
A. Well, so remote that you would have to have a spy glass to see it.
Q. You then think that rapidity of movement is of no moment in rate making?
Mr. Dillard: He did not say that at all.
Mr. Teal: Let the witness say what he says.
A. I didn't say that. I think if you would increase the speed of a freight train in order to take care of the commodity, you have got to reckon with that factor; and I may add that we do. We have some commodities on which we have to give faster service; and we do consider that a factor.
Q. In this lumber business, generally speaking, in carloads, the shipper always loads it, doesn't he?

A. He does, yes.

Q. And generally speaking, in carloads, the consignee unloads it, doesn't he?

A. That is the custom.

Q. And the terminal service rendered at either end of the line is extremely limited, isn't it?

A. It is as to the unloading. The terminal service varies, of course, as most of this lumber goes into what we term lumber yards on industrial tracks, which represent quite an outlay to the railroad serving them.

Q. Now, it is generally loaded in the yards of the lumber companies, isn't it, at their mills?

A. Oh, yes.

Q. And you wouldn't say that there was any such terminal service applicable or chargeable to the lumber traffic as there is to the ordinary commodity moving on a railroad; do you? You wouldn't say that?

A. I don't think that the lumber yards at any particular destination would equal the general yard facilities of a railroad; but the peculiarity about lumber—and it is not confined to lumber; it is on coal, if you please, and some other commodities,—you have to have special tracks built to special yards, sometimes over the ground not owned by the carrier, but they get an easement from the party owning it, as a matter of commercial convenience. Now, the railroads have gone to an extreme on that, in expanding in large cities their side tracks, and it often happens that they incur a large expense to get these facilities in, and after they have gotten them it has to be used on what I term the a la carte plan, by competitors coming in and absorbing your switching charges, so that oftentimes you may spend, we will say, ten or fifteen thousand dollars in putting in a side track, and at the end of the year you may have gotten 500 cars at perhaps less than $5 per car revenue, and your road revenue may have been insignificant.

Q. Now, then, in the question of damages,—does much damage arrive from the handling of lumber on railroads—damage claims, I mean?

A. No, sir.

Q. It is very limited, isn't it?

A. It is limited.

Q. Now, on the whole, would you consider lumber a good freight to handle? I don't mean to turn the Union Pacific into a lumber road, but I mean to have your lumber—

A. It is desirable traffic—lumber is.

Q. Now, taking your west bound freight: Do you have any west bound freight that is remunerative?

A. Well, we hope so.

Q. What?

A. Well, our fifth-class rates, or our classification rates.

Q. That is on local business, is it?

A. On business generally. We don't intend to haul any freight for less than cost.

Q. Not even including lumber?

A. Not even including lumber; that is right.

Q. So that you would state that the general run of your rates west bound are all remunerative?

A. We feel that our business is remunerative at the present time. Yes, I will say that, speaking generally, our rates are remunerative.

Q. That is what I wanted to know.

A. We may have some very foolish rates, but the whole body politic is remunerative.

Q. Now, is lumber the commodity carrying, prior to this advance, the lowest rate on your road?

A. I cannot answer that without reference to the figures.

Q. How about coal?

A. My recollection is that our revenue on coal is about 6.2 mills per ton per mile. Of course we don't haul coal anywhere near the distance that we do lumber. Our average haul on coal from the Wyoming mines, our source of supply, would be between 600 and 700 miles, to points in Nebraska; and we have had very little of that in the last few years, because the demand in the west nearer by, for coal, has been such that we have had to virtually turn Nebraska over to other parties who could supply coal. We haven't had enough coal to go around, from our standpoint. But, for the sake of comparison, 6.2 mills, I believe, would be a fair illustration.

Q. Now, the ores carry a lower rate per ton per mile than lumber, don't they?

A. Well, there are some very low rates on ore; I am quite well aware of that.

Q. Do you think they are remunerative?

A. By themselves they are a ballast rate, some of them.

Q. Do you think they are remunerative?

A. Not particularly so.

Q. Those are all east bound—the ores—are they not?

A. East bound, yes.

Q. Have to haul empties for them west bound?

A. No.

Q. What do you haul in the ore cars on the Short Line?

A. We use box cars for ore loading.

Q. And what do you haul up there for the ores over the Oregon Short Line?

A. The movement of ore over the Oregon Short Line is small; it is not heavy. We are not a very heavy ore carrier.

Q. You don't remember the percentage of ores that are handled on the O. R. & N. and Short Line as compared with the balance of their business?

A. No. There is some from the Coeur d'Alene; I don't recall the percentage.

Q. Would you be surprised if I told you that in 1907 your percentage of business on the O. R. & N. Co. from mines was 28.61 per cent. of your whole business, and on the Short Line 52.11 per cent., and on the U. P. 31.95?

A. No.

Mr. Dillard: Are you including coal in that question?

Mr. Teal: Yes. I presume "mines" covers everything of that kind.

The Witness: I may add in that connection the figures I had in my mind in addition to the 6.2 mills, that the Union Pacific tonnage on coal was about 32 per cent. I came within about 5/100 by the guess. And that our revenue on coal was about 11 per cent.

Q. I am speaking of the Short Line; that is the ore carrying road?

A. As to the Short Line I haven't the figures.

Q. But your ore rates are what you would term on a ballast rate?

A. I think so, yes.

Q. Still they are remunerative?

A. Well, there is a lot of consequential business that goes with the ore traffic.

Q. The fact is it is almost impossible to separate business on a railroad, isn't it, and just say what is remunerative and what is unremunerative?

A. It is a difficult problem.

Q. That is what I thought. The Oregon Short Line is a very fine paying road, isn't it?

A. It is a good property.

Q. And a very large part of its business, as is shown by its own reports, is coal and ore, isn't it?

A. Yes.

Q. And another considerable part is carrying lumber, wasn't it?

A. I don't recall the lumber figures but they had quite a lumber traffic.

Q. Now, passing those, do you know of any other rates that have been in effect in the last two or three or four years that were lower than lumber rates,—produced less revenue?

A. I don't recall any.

Q. Are you familiar with the China and Japan rates?—the Asiatic rates?

A. I know something about them.

Q. Were they low rates?

A. Absurdly.

Q. And did they pay the cost of service?

A. Very doubtful, in my mind, whether, all things taken into consideration, the railroads got a dollar back for a dollar spent on that Asiatic traffic; in other words, it is doubtful in my mind if they actually did not increase our expenses without any increase in revenue. We have gone out of the business on a large mileage.

Q. Of course it never was the intention to do anything of that knid, was it—to pay for traffic?

A. No; no.

Q. Now, you remember that in the Spokane case it was testified that these rates paid more than the cost of movement? Do you remember that?

A. I didn't hear that testimony. It did not impress on me.

Q. But those were absurdly low rates?

Mr. Donnelly: Who testified to that, Mr. Teal?

Mr. Teal: Mr.—I was almost going to say the counsel.

Mr. Dillard: Donnelly?

Mr. Holden: If you leave it that way I don't care.

Mr. Teal: No, but I think I will find who testified to it, because that was the claim made, it was argued to the Commissioner, it was testified in the evidence and it appears in the briefs.

Mr. Holden: You don't contend that all that appears in the brief, do you?

The Witness: We don't claim our tariffs are always immaculate.

Q. That is not what I was speaking of. I was speaking of making a comparison between these lumber rates and other rates, so as to arrive at some point of comparison, as to whether or not they were fairly remunerative—your rates.

A. Well, I should compare the Asiatic rates, on the one hand with the free rates, on the other, given to a charity or-

ganization. I think that would be about a fair comparison. Nothing in it, anyway.

Q. Now, I will ask you this: In undertaking to make a rate, do you consider the cost of the road in making the rate?

A. I don't think the average freight man knows how much the road costs.

Q. Do you consider the cost of its replacement?

A. We mentally recognize that a road has to be rebuilt and refurnished every ten years.

Q. No, but I mean when you sit down to make a rate do you consider the capitalization, bonded indebtedness, the cost of replacement?

A. We have it before us the same as you have the stars of night before you, but I don't think we see it all the time during the day time.

Q. Now, I would like to ask you if you agree with this gentleman, one of your traffic managers, connected with your road, on rate making—I will read the questions I asked him, and then will ask you if that is your basis? I asked him, "I will ask you a specific question. Are your rates based on the earnings of your road"—this was Mr. Miller. Mr. Miller said, "No, sir." Are your's? Can you make them?

A. That is not the controlling factor. I would agree with him on that as a general answer.

Q. Then I asked him: "Does the amount that is invested in the road enter into it?" His answer was, "No, sir." How is that with you?

A. I think the amount that is invested in the road does enter into all rates on that road, and if you disregard that factor at the end of the year, you will find yourself bankrupt. So that the answer "No," I take it in that case, means this: If you go in to Mr. Miller and ask him for a rate on canned salmon from Portland to the Dalles, it never occurs to him what the road cost per mile between Portland and the Dalles. Other considerations outweigh it. At the same time he has got to not be unmindful that there is a cost there.

Q. Then I asked this question: "Does the cost of the road enter into it?" He answered that, "No, sir."

A. It does, indirectly.

Q. Now, you take on the U. P. since you have been connected with it. There have been vast improvements in every possible way in its physical condition, which is reflected in operating cost, haven't there?

A. Great improvement.

Q. You carry very much heavier trains now, do you not?
A. We do.
Q. You have very much larger cars?
A. Yes.
Q. Very much heavier loading to the car?
A. Yes.
Q. And very much larger return from a car than you did ten or twelve years ago?
A. Yes.
Q. And the road generally is in a very much better physical condition?
A. It is.
Q. Do those factors enter into whether or not a rate should be raised, advanced or held even?
A. Well, they are all a factor.
Q. Well, I asked Mr. Miller this question on that: "After going over the fact that you carried heavier trains, more tonnage, the locomotive handling more freight, the cost of operation reduced, I asked you if all of those things in rate making do not enter into it at all, as I understand it, and your answer was, 'Generally speaking they do not.' Is that true?" "Mr. Miller: I think that is true, yes." You don't agree with Mr. Miller on that?
A. I agree they have an indirect bearing, although I think the man who makes the rates in answer to the specific inquiry, figures more on commercial conditions.
Q. Now, Mr. Miller is the General Traffic Manager of the O. R. & N. Co. at the western end of the Union Pacific system, isn't he?
A. The General Freight Agent.
Q. Well, he is more than Freight Agent, isn't he?
Mr. Holden: General Freight Agent, he said.
A. General Freight Agent of the O. R. & N.
Q. Does he have anything to do with making rates on the O. R. & N.?
A. Indeed he does.
Q. He makes the rates out there, does he?
A. He does.
Q. So he knows what basis he is making his rates on?
A. Certainly.
Q. Now, do you know of anything within the last five or six or eight years that has put in effect substantial advances in rates on lumber over your road?
A. Any lumber advances? I didn't quite get the question.

Q. I say, do you know of anything that has been done in the way of rate-making or rules respecting the handling of lumber, that has increased the earnings on a carload of lumber?

A. Well, the increase in the car capacity—the larger car—would automatically do that.

Q. Then there has been an increase, and quite a large increase in minimums, has there not, in the last eight or ten years?

A. Yes, that is right.

Q. And that has, in itself, operated to increase pro tanto the earning capacity of the car?

A. That is true.

Q. I understand, then, the reason that you now give for the advance in the lumber rates—you know the advance which is in question here of course—was because of the fact that in your opinion the rate was not sufficiently remunerative, and that owing to changed conditions in lumber production in other sections it could stand a higher rate?

A. Yes, sir.

Q. I suppose you would take substantially the position that was defined by one of the witnesses—

Mr. Dillard: Excuse me. By you in your brief—not by the witness, I think.

Q. I suppose you would take substantially the position that was taken by Mr. Miller, to-wit, that the lumber business was prosperous and it could stand the advance in rates?

A. Well, that is rather a terse hard way of putting it.

Q. Let us mellow it a little bit and maybe we will be at the same conclusion, anyhow. Now you state your way.

A. I believe that these new rates applied to lumber would not, first, restrict the movement; second, that they would yield a fair return to the lumber shipper; third, to the dealer; fourth, that the price would be reasonable, entirely within the limits and ability of the consumer to pay, and that the advance would not create any hardship anywhere upon anybody.

Q. That is the reason of your justification, as you understand it, for the advance on the Union Pacific railroad?

A. That is my judgment.

Q. And you participated in it, and in arriving at this conclusion about the advance—

A. Well, I don't know that I personally had any talk about this. My views have been very pronounced on this subject.

Q. You said you had talked about advancing it with everybody.

A. I said our department. I have had more or less talk about it. But those are my views, and would be considered by me in the consideration of the question.

Q. Did you have anything to do with the installation of this rate? It is quite immaterial what your views are, unless they had some effect.

A. Yes, we were represented at those meetings, and those were the ideas that I intended to inculcate in the minds of our representatives who reported to me.

Q. Now take the 10 cent advance to Denver, from 40 to 50 cents. Does the same justification which you have just recited apply to that advance?

A. Yes.

Q. You think that was right?

A. I do.

Q. And you think a 25 cent advance was not unreasonable?

A. It was not a question of a percentage advance. It was a question of getting a rate not unreasonable in itself, and getting a fair return for the service rendered; not excessive, but a fair return.

Q. Now, boiled down, you do believe that the business of the lumbermen could stand the advance?

A. I do.

Q. And for that reason you put the rate in, didn't you?

A. That was one of the reasons.

Q. And during all this time you were getting more per ton per mile for your lumber shipments than the northern roads were hauling it?

A. I don't know what their rate per ton per mile is, but based on eastern terminals that would be true, our distance being substantially the same as theirs and our rate being higher; but to Denver it might not be true.

Q. Did you make the statement a while ago (I may have misunderstood) that rates had been going down in every direction for the last few years?

A. Yes.

Q. What rates do you refer to, and what years?

A. I have in mind now, for instance, the class scale from what we call eastern terminals—St. Paul, if you please, for the northern lines, and Montana. We were getting a 2.50

scale; we are now getting a 2.25. To Utah we were getting a 2.30 scale from Omaha; we are now getting a 2.05. At points in Nebraska, by legislative action, we have had a reduction in the last two years of 15 per cent.

Q. But that is in the last two years?

A. In the last two years, yes.

Q. But you were referring to conditions before that, which led to the raise in this lumber rate. I am referring now to conditions which existed prior to this advance in the lumber rates. These are all things that have occurred since the Minnesota Commission rates and the Nebraska Commission rates.

A. The general tendency of rates has been downward, all over the country, as you know.

Q. That is one thing I would like to know, because I have seen that disputed so absolutely. When you say that the general tendency of rates has been downward, do you mean that the rate per ton per mile has been decreasing because of decreased rates, or has it been decreasing by longer hauls and different character of products?

A. The rate per ton per mile has decreased from two causes: one is the decrease in rates per se; the other is the increase in the movement of a very low class of tonnage.

Q. Yes, that is what I thought entered into it.

A. And those two factors come together and reduce the average. Now I say that rates have been on the decline. In evidence, why, I would have to submit the average revenue per ton per mile of many of these carriers.

Q. Does that mean anything?

A. Whatever it may mean, it may mean that or it may mean not so much. Now, of course, we look back over the past and we see in our mind's eye the reductions that have obtained. When I first came with the Union Pacific we had 3.30 on first-class from Missouri river to Salt Lake; we had something like $5, I think, on first-class from Missouri river to Montana common points. Those rates have dropped step by step until we now have 2.05 in lieu of 3.30, and 2.25 in lieu of—I think the rate was five and a quarter; that, of course, was several years ago. Now I have in mind the Denver scale. When I first went into the Union Pacific we had a 2.40 scale from Omaha to Denver. That has dropped down by degrees, until now it is a 1.25 scale. So that is what I have in mind when I say that rates gradually have been on the decline in the last few years.

Q. Accepting that as the correct statement, the earnings of your road have grown by leaps and bounds during the same time, have they not?

A. They have grown since eighteen hundred and—

Q. Since the reorganization.

A. Since 1898 we have had an increase in revenue each year, which, of course, has been very gratifying. Prior to that time we had a decrease which was, of course, as you know, very disappointing.

Q. Very disappointing, of course, but the U. P. was not running then as it is now, was it?

A. But the business has grown in the last few years.

Q. Notwithstanding the reductions you speak of, there has been, as I say, a constant increase in the revenue of the companies?

A. The gross revenues, yes.

Q. And likewise the net?

A. Yes.

Q. Now, do you carry much wheat or corn on your roads?

A. We carry most of our wheat in Kansas.

Q. Where do you carry it to?

A. Mostly to Kansas City.

Q. What is the haul on that?

A. From 250 to 350 miles.

Q. And what is your average rate per ton per mile on your wheat?

A. My recollection is we get about 14 cents a hundred—from 14 to 15 cents a hundred. I think $3 a ton would be our average revenue into Kansas City, from the wheat belt, covering 250 to 325 miles.

Q. And what is the rate per ton per mile?

A. It is about a cent per ton per mile.

Q. And how about your corn through Nebraska?

A. Our corn in Nebraska would run on about the same basis, I think. I am speaking now entirely from memory. We have those figures which I could get, of course, by looking them up.

Q. Those are short hauls compared with this lumber haul?

A. Yes, it is short haul compared with that.

By Mr. Walter:

Q. The increase in the freight rates on lumber meant just that much added to net revenue, didn't it?

A. I think substantially so.

Q. It cost no more to do the business on the advanced rate than on the old rate?

A. I think that is a correct assumption.

Q. So that the increase of 25 per cent. in the Denver rate meant a good deal more than 25 per cent. of the net revenue on the lumber business?

A. Yes.

Q. And the increase in the St. Paul and Omaha rate meant much more than 20 per cent. increase in the net revenue?

A. Yes.

Mr. Holden: There wasn't any 20 per cent. increase in the Omaha rate, that is the only difficulty about that.

Mr. Walter: The increase from 50 to 60 cents would be an increase of 20 per cent., wouldn't it?

The Witness: Yes.

Q. And that meant much more than a 20 per cent. addition to your net revenue on your lumber business?

A. Yes.

Mr. Holden: The increase to Omaha was not to 60 cents; it was 55 cents. There was a 12 1/2 per cent. increase to the Missouri river.

The Witness: Your idea is that the increase followed the net?

Mr. Walter: Yes.

The Witness: I admit it.

Q. Now, if that increase had been taken in all of your business, it would have meant a very great increase in your net revenue?

A. Certainly.

Q. And you are already able to pay substantial dividends and all your interest charges?

A. We are at the present time.

Q. Now, in these conferences in which the increased rates were determined upon, was the amount of the increase that which was suggested by your line, or did you suggest a greater increase?

A. I don't know.

Q. Did anybody suggest a greater increase than that which was put in?

A. I don't know.

Q. You have testified in a number of rate cases, haven't you, Mr. Munroe?

A. I have.

Q. Before State Commissioners?
A. I have.
Q. The Interstate Commerce Commission?
A. Yes.
Q. And before courts and masters?
A. Yes.
Q. In opposition to reduced rates?
A. Yes.
Q. In any case did you find that the proposed reduction was just?
A. Yes.
Q. The rates complained of were unreasonably high in your opinion?
A. Yes.
Mr. Dillard: Which rates were those? I didn't hear that.
Mr. Walter: The rates complained of before commissions and before courts.
Q. In your testimony did you find that those rates—any of them—were too high?
A. Yes.
Q. In what particular cases?
A. One of the last cases in which I testified was a case involving rates on coal from Southern Colorado to points in Kansas, where we had no joint through traffic, where the rates were based on a local south and a proportional east of Denver. We stated at that hearing that we thought there was merit in the contention and that the rates should be adjusted, and we agreed at that very hearing with the other line interested to reduce them, and so announced our conclusion.
Q. Now, any other case?
A. Well, that is the most recent one. We do not pretend to say, as I remarked before, that our rates are immaculate. We make mistakes the same as anybody else—sometimes I think a great many of them, but wherever we do make a mistake we are just as desirous of correcting it as anybody else. We want to have our rates proper and just. We are not fighting the public—we are trying to cooperate with them.
Q. Now, Mr. Munroe, any other case besides these coal rates that you can think of, where rates were challenged, where you in your testimony said that the rates you had in effect were unjust and unreasonably high?
A. Well, that is the principal one that is now resting in my mind. I don't recall others at this moment. But I may add that as a result of various hearings we have made various changes, and without waiting for an order.

Q. Where you have felt reasonably certain that an order would ensue, or circumstances of that sort were shown, you did make some reduction?

A. Well, we have not entirely on account of the coming order, but because we felt that the changes in themselves should be made on the merits.

Q. Before those complaints were made, requests had been made to you to reduce the rates, hadn't they?

A. Yes.

Q. And you failed to reduce them on those requests, and as a result formal complaints were instituted?

A. Yes.

Q. Now, the making of a freight rate is largely a matter of judgment, isn't it?

A. It is.

Q. A matter of opinion?

A. Yes.

Q. There is no method by which you can determine by any mathematical system, any accurate system, what a rate should be, to be just to the public and to the carrier and to all concerned?

A. There is no fixed rule.

Q. And the rates that were increased were made by the carriers because they wanted more revenue?

A. Yes.

Q. You don't pretend to say, Mr. Munroe, that your judgment as to the reasonableness of a rate is exact?

A. Oh, no; I am not infallible.

Q. And when you say that the rates you had increased in November, 1907, were just and reasonable rates, you were speaking from your standpoint and in your opinion only?

A. That is all.

Q. Is it your theory that by reason of depletion of one source of production, the consequent increased demand for one article to be transported, you have the right to put such a rate upon it is will permit its free movement to the market?

A. I think so, yes. I think a common carrier has the right which is accorded every citizen—to share in the prosperity. I cannot convince myself that it is American, that it is just, that it is proper, because an aggregation of American citizens have associated themselves into a corporation, that they should be denied a reasonable share in the prosperity. I cannot convince myself that if it is right for these lumber dealers in the south to get $9 per ton increase for the sale of their commodity, that we ought to be held rigidly down to our rate. I

recognize that they are entitled to a fair increase under commercial conditions, and I contend that the sale of transportation is a commercial transaction, and that we are alike entitled to a fair share—no more, and should not be called upon to accept less.

Q. Now, you advance the proposition that all profits which accrue from a business which involves transportation of commodity produced, although those profits may largely result from business industry, business acumen, the sagacity of the lumbermen, for example, new methods of making lumber,—that because of the increased profit, the increased demand for lumber, you have a right to share in that profit?

A. I would not put it that way. I regard the common carrier as a partner—the intermediate link between the producer and the consumer, and that all three should work together for the best interests, and what helps one naturally helps the other; and the minute we spend more money in the building up of our property, then, automatically, the consignor and consignee are benefited, and should be. The public is the one to get the benefit of these improvements. We have a right to share in it. That is all I contend.

Q. Without regard to whether the rates before the increase, in profits, were sufficient to pay you for the service and give you a fair return on the property invested?

A. If the rates as in effect were properly remunerative, there might be some question about it; but if they were not, to my mind there would be absolutely no question whatsoever.

Q. Well, you do know that as a result of this increased rate, lumber mills closed down in the northwest?

A. No, sir,—and I don't believe it.

Q. And that there was stagnation in the trade?

A. I believe it was due to causes entirely foreign to the rate.

Q. Well, it did happen coincident with the increase?

A. It was a coincidence.

Q. At substantially the same identical period?

A. About the same time, yes. It also happened that the panic occurred on October 28—three days before. I contend that the stagnation, so-called, in the lumber business was inevitable; would have occurred perfectly regardless of the freight rate; did occur from causes natural, and that no freight rate could have changed it.

Q. Did you see that coming in the lumber industry?

A. I am sorry to say that I did not see the panic coming as clearly as some did, but I did see it very plainly on October 28th when I couldn't get a dollar.

By Mr. Teal:

Q. You said that stagnation in the lumber business was inevitable. Why so? We would like to know that.

A. Because I believe lumber had gotten top heavy in price. It had gotten to a point where the consumers in our territory believed it was top heavy. They did not dare to stock up. There was a general apprehension that something was coming, and we were reaching the climax, and we all know the climax did come on October 28th.

Q. And notwithstanding that you added from 12½ to 25 per cent. increase to the rate on lumber?

Mr. Holden: That is not a fair statement of the record. The tariff was filed more than a month before that time.

Mr. Dillard: The witness will take care of himself. Go ahead and answer, Mr. Munroe.

The Witness: The filing of the tariff had nothing at all to do with that question. We were all looking for something that we didn't want to find, and you know it came like a thunderbolt out of a clear sky, and the intervening Sunday is the only thing that saved us from a very complete panic.

Q. Now let us get an answer to my question, and you can explain afterwards. You say that during the year 1907 consumers felt that the price of lumber was too high—it was top heavy?

A. Yes.

Q. And yet in the face of that you added from 12½ per cent. to 25 per cent. to the total freight charges on lumber going to the consumer? That is true, isn't it?

A. We—

Q. Is that true or not?

A. I will say yes, it is true.

Mr. Holden: Now proceed, Mr. Munroe.

The Witness: And furthermore, that being true, we did not treat anybody unjustly, and these causes would have occurred entirely foreign to any action taken pro or con on the freight rate—just as I believe that the price of wheat today is too high. We had a collapse yesterday of 4 cents, and we are apt to have another one any minute. In other words, we cannot regulate our action on freight rates by our surmises of a coming panic.

By Mr. Teal:

Q. In connection with these Asiatic rates, you remember you testified as to their remunerative character?

A. Yes.

Q. When were those rates taken out?

A. I don't recall the date, but some time since.

Q. In 1908, wasn't it?

A. I think so.

Q. Why were they taken out?

A. The Interstate Commerce Commission made a ruling that the import or inland proportions should be published, as I understand it. They would naturally have more or less bearing, and were already beginning to have, on our domestic traffic. But I think they, naturally, were drawn out by reason of one of the orders of the Commission, following that.

Q. Then, the reason those rates were taken out was because the Commission ordered certain publicity which might affect domestic rates?

A. That was one of the reasons. I may add that I think it is neecssary for the Commission to make some announcements now and then, in order to free ourselves from some of these rates. For illustration, a 2-cent rate from New York to Galveston is so absurd in itself that nobody would contend for it, and yet you might find a carrier who, for reasons of his own, wants to keep it in, and thus menace the whole situation.

Q. Those rates had been in effect for many years?

A. Yes, sir.

Q. And were not taken out until the Commission issued its order?

A. No.

Q. And they were taken out for the reason that they were published over the country?

A. That is true, certainly. I think so.

By Mr. Wimbish:

Q. Mr. Munroe, I understood you to say that you think the carriers and the public should cooperate; that in a sense they are partners?

A. Yes.

Q. And that if the particular industry or trade becomes prosperous, that up to the limit of reasonableness you are entitled to share in that prosperity?

A. Yes.

Q. Do you think that carriers should come in and share the burdens of the shipper in times of adversity?

A. I think they do.

Q. You think they should do so?
A. I think they do do so.
Q. You advanced the rates on lumber, among other reasons given by you, because you thought the industry was prosperous and could bear the advance. Now, it happened that about the time the advance went into effect, the panic came and the industry became very much demoralized?
A. Yes.
Q. Did you reduce your rates in view of that situation?
A. No.
Q. You put your advance in, then, on a theory which you found to be unjust in fact, and yet you have never corrected that by taking off the advance?
A. I think to have reduced the rates on lumber on account of the panic would have been a crime; it would have been equivalent to suicide for the carriers, and would have injured the industry more than it would have benefited it.
Q. You were speaking of Chicago as having been, in years past, the great lumber market, and you mentioned the Chicago fire and the rebuilding of the city as one of those causes.
A. Yes.
Q. When was the Chicago fire?
A. In 1871.
Q. Did any southern lumber move into Chicago as early as immediately following the fire?
A. I was not living in this part of the country at that time, but I assume that it did, and my assumption is predicated on this: that in my old New England home, in the 1870's Georgia pine was a staple. Now, if that were true along the Atlantic coast, why, I suppose that nothing was too good for Chicago, and they probably got some of that Georgia pine. It was not so large in volume, I appreciate.
Q. Don't you know that the New England States are reached by the Georgia pine by water transportation, and don't you know that for a long number of years that was not only the chief but the principal domestic market, almost the sole domestic market, for Georgia and Florida pine, and that it had to move into Chicago?
A. No, I did not know that.
Q. You did not know it to be a fact that, beginning in 1893, the rates from Georgia into this territory were reduced in successive steps until they reached the point on which the lumber was moved, and that beginning practically in 1893 was the movement of southeastern lumber into this market?

A. I am not familiar with the situation from the southeast in here.

Q. You don't know, then, that the movement instead of decreasing, had continuously increased until the panic of 1907 demoralized conditions?

A. I am not familiar with the movement in the southeast.

Mr. Dillard: I want to understand you there. Do you mean to say that Georgia pine moves in any considerable quantities to Chicago now?

Mr. Wimbish: I will get to that.

Mr. Dillard: Well, I just wanted to understand your question.

Mr. Wimbish: You will understand it before I get through.

Mr. Dillard: All right.

Q. Then, you were testifying upon the assumption, when you stated that in years past more lumber moved from the southeast to Chicago than now moves—

A. I don't think I stated that. I said more or less lumber. I am not familiar—I do not feel competent to testify as to the movement of lumber from Florida and Georgia to Chicago.

Q. Well, do you know it to be a fact that the lumber maving from the southeast into Chicago and this territory was and is largely confined to car material—stuff of that kind?

A. No, I am not familiar with that.

Q. And there are as many car factories here now as then; that is, there is more demand for that grade of lumber?

No answer.

Q. Coming now to a territory nearer Chicago and nearer Omaha, you spoke of the lessening of the yellow pine competition at Omaha and in Nebraska and Kansas, and in regard to one of those places you spoke of the export trade. Do you know the extent of the export of lumber from the south—and by the south I mean Mississippi, Louisiana and Texas?

Mr. Dillard: No, he didn't say as to that.

Q. What did you mean by speaking of the export trade?

A. A few weeks ago I found at a point on the Union Pacific that we were not doing our share of the lumber business, and having a natural interest in getting the long haul, having the money spent by the consumer in Nebraska going to the shipper in Oregon, if you please, I took up negotiations, and got the names of a number of dealers in Oregon and Idaho, and possibly in Washington. I said, can't you manage to come down here and sell this lumber and take a fair share of the trade. The answer I received was that at that time they were

having a very nice demand for lumber of that grade for export, which netted them more money f. o. b. cars Portland than these Nebraska shipments would allow, and until they filled the export trade at the higher figures, why, they would hardly be in shape to give us much attention. That was the idea of it.

Q. Then, you did not mean to say that the export trade affected the supply of southern lumber available to come into—

A. No, my export remark was entirely at the Pacific Northwest.

Q. Then, I misunderstood you. Do you know what proportion of the cut of yellow pine in Mississippi, Louisiana, and Texas, comes into Chicago and points west of Chicago?

A. I do not.

Q. Do you know what the yellow pine lumber cut was for the year 1907?

A. I do not recall it, no.

Q. Do you know of your own knowledge, Mr. Munroe, that there is any lessening of the competition of yellow pine in these western markets, and by that I mean Kansas and Nebraska, taking Omaha as the base?

A. My information comes from lumber dealers and is to the general effect that the western lumber is coming in gradually, more and more, into Nebraska and into Missouri river, particularly Nebraska, and that it is only such cases as the export one to which I referred that is retarding its movement east bound, and the Nebraska dealers generally feel that it is only a question of time when they will get a great deal more lumber from the west than they have heretofore been receiving. That is the idea I meant to convey.

Q. Do you know that lumber is now abnormally low?

A. I understand it is regarded very low at present.

Q. Do you know the conditions of the lumber manufacturers in the south?

A. I have heard that many of the mills have closed up temporarily.

Mr. Teal: Any in the west?

The Witness: I have not heard so much about the west recently, although I did hear about the time of the panic that a number of the mills closed.

Q. Mr. Munroe, how would you make a rate on lumber from Portland to Omaha, if the market conditions at Omaha were such as to give you practically free rein? What rate would you make on lumber?

A. A free rate?

Q. A free rein; if the price there were sufficient to justify any rate, what rate would you make as a fair and reasonable rate from Portland to Omaha?

A. Well, I should consider the conditions at Omaha; I would be governed somewhat by the volume of business in sight, the various points of supply; I would get in touch with the dealers there, get such information as I could, and I am inclined to think I should make a rate of about 60 cents a hundred as a reasonable besis from the North Pacific coast, Portland, because I would know when I made the rate from Portland that I would automatically make it from Willamette Valley points. And I am free to say I would be influenced somewhat by the fact that these other points of supply would not represent 60 cents for the east of Portland, but that is an off-hand statement in answer to an off-hand question.

Q. I wanted to know how you would arrive at making a reasonable rate, if competition at the point of destination should be eliminated. In other words, if the yellow pine cut had not spoiled the yellow pine forests, white pine no longer being a competitor.

A. I should arrive at 60 cents, and I would be influenced more or less by comparison. There would flash up before me the canned goods rate, say of 75 or 80 cents, and the Pacific coast commodities in general, and I would recognize that lumber was a heavy commodity, rough, attended with a minimum loss as to damage, and that if you got it too high you would retard building and hold down the movement. My object would be to get the maximum movement at a reasonable rate, but I would not want to do anything to unduly curtail the movement. I would want the business rather than the tariff; that is, I would not want a paper tariff, a dead-letter tariff.

Q. In other words, then, you would make a rate as high as the traffic would bear and move freely?

A. I would make a rate no higher than the traffic would bear. That is an expression often misunderstood, often misquoted, and generally misinterpreted. I do not believe in making a rate all the traffic will bear. I think the man who is at the other end, who ships and who is the consumer, is entitled to consideration; but you ought never to make a rate more than the traffic will bear.

Q. That is suicidal. Traffic will not move under that rate?

A. You cannot make a rate that will absorb into the cof-

fers of the railroad all of the profits of the transaction. The shipper and the consignee must have something.

Q. And is it a matter of intuition as to what point you will stop in making the rate?

A. Well, intuition has its bearing on that. That is a rather sensitive word with me, you know.

Q. Have you any other standard of test except your intuition or your judgment?

A. Well, I want you to understand this word "intuition." In one of the Denver cases I testified that "instinct" is one of the factors in the mind of a freight man in making a rate. Chairman Prouty, who was chairman at that time, at the hearing, questioned the propriety of the word and suggested "intuition." So I have heard "intuition" off and on ever since.

Q. Well, I desire to beg your pardon; I did not know that I was dealing in personalities.

A. But I made my comparison to convince the chairman, and I would like you to have it. I said a man goes up to the bank teller with a roll of bills, to make a deposit. The teller receives those bills, he picks them over, and instantly he throws out one. He knows it is counterfeit. He cannot tell you why or in what respect, but he says, "It's counterfeit." The glass is put on it and his impression is confirmed. Now you go to a freight man; you get a rate; he knows it is counterfeit. You go to a doctor, he takes the pulse, he knows it is wrong, and he makes his examination. Now that is what I mean by making that remark.

Q. Do I understand you to say that is the way in which you make rates or judge of the reasonableness of rates?

A. That is one of the factors which I keep in my mind.

Q. What is the rate per ton per mile on lumber from Portland or common points to Omaha?

A. 45 cents—substantially 5 mills.

Q. What is the average rate per ton per mile of all the lumber traffic on the Union Pacific?

A. I cannot tell you from memory, without referring.

Q. Can you get me that?

A. Yes.

Q. I would like to have that.

Mr. Dillard: What is that?

Mr. Wimbish: The average rate per ton per mile on all of the lumber traffic of the Union Pacific.

Mr. Dillard: Do you mean the Union Pacific alone or the Union Pacific, the O. R. & N. and O. S. L. combined?

Mr. Wimbish: I mean the Union Pacific and its related lines.

Q. What is the distance from Omaha to Portland?

A. Substantially 1800 miles.

Q. Did I understand you to say that you regarded the rate applied per ton per mile for that length of haul on lumber, a low rate?

A. Yes.

Q. You were speaking of the injustice of some comparisons made by Mr. Anderson, I believe, between the rate per ton per mile from points in Georgia to Chicago and between points in the west. You would regard Omaha as your gateway to the east, would you not?

A. Yes.

Q. It is a fair market for consumption and distribution of lumber that you haul to Omaha and beyond?

A. Yes.

Q. Now, Cairo would be a similar gateway for the southern lumber, would it not, distributing it to Chicago and St. Louis and the northwest; so regarded by the railway men, is it not?

A. Well, I am not familiar with that situation. I don't know anything about that.

Q. Well, I will say that it is the base point. Do you know what is the rate per ton per mile on lumber from, say, Lumber City, Georgia, and other points on the Southern Railway between Macon and Brunswick, to Cairo proper and beyond—a haul, I think, of about six or seven hundred miles?

A. I am not sure as to my mileage. No, I do not.

Q. If you were told it was less than four mills—3 1/2 or 4 mills per ton mile, would you regard that as a low rate?

A. Very.

Q. How do you regard it as compared to your rate of 5 mills per ton mile to Omaha?

A. I have never been over that property and I could not make any intelligent answer without familiarizing myself with the conditions, and I know absolutely nothing of them, but my impression would be this. My first thought would be: No wonder that the Southern Railway is not a better financial proposition than it is—no wonder, if they have got very much of this 3 1/2-mill business, that they are having their troubles.

Q. How about the Louisville and Nashville?

A. The Louisville & Nashville is a more prosperous company, and if they were making it my impression would be that some other class of traffic is paying for it. I don't know so much about the Louisville & Nashville, but I don't believe the Louisville & Nashville can operate for 3½ mills per ton per mile.

Q. On all of its traffic?

A. They cannot do anywhere near that, for that matter; and I would say that lumber was not contributing its fair measure. It may be all they can get—they may regard it as ballast—there is some of that which we have to do—but not a fair rate.

By Mr. Walter:

Q. Mr. Munroe, I just want to ask a few questions. In making your rates for the Union Pacific you use your instinct for the carrier?

A. Not solely.

Q. When the Commission makes rates, for whom does it operate, whose interest does it consider?

Mr. Dillard: I think that is purely a legal question, and one that he may not even know. If you want an admission, I will say that they consider the public and the railways both, if you want it that way.

Mr. Walter: I just wanted to get Mr. Munroe's idea.

Mr. Dillard: Theoretically, certainly.

The Witness: We have always felt that the Commission was a body created to be fair alike to the carrier as well as to the shipper. Sometimes we have thought that their vision became blunted after they had seen the shipper, and we were so far in the rear as not to be visible. But we have regarded it as not of intent. I think the Commission want to do fairly by both parties, but I think they are a little bit leading towards the—

Q. Do you think they make rates by instinct?

A. I don't know how they make their rates.

(A recess was here taken until 2:00 o'clock P. M., at which time the witness was recalled and his examination was resumed as follows.)

By Mr. Dillard:

Q. Mr. Munroe, you were asked with regard to the conditions under which the Union Pacific lines could handle traffic now and the conditions under which they could formerly handle traffic, and stated that they were now handling traffic cheaper than formerly. Has not it been necessary to make a

very large capital expenditure in order to bring that about?

A. I don't recall having said that they were handling it cheaper per unit. They are handling in cars of very much greater capacity, more tons per car, more cars per train, and the elimination of grades, curvature and the shortening of the line the putting in of tunnels, all very expensive improvements, which are showing their effect in that way.

Q. That has called forth, in the first place, a large expenditure of money, has it not?

A. Very large.

Q. This good management has called forth also the expenditure of business judgment and sagacity on the part of the owners and managers of the road, has it not?

A. Yes.

Q. But according to Mr. Walter's theory, while that sagacity and good judgment must be left to the lumber men as their sole property for the purpose of increasing larger profits, his insistence is that so far as the railroads are concerned the more of that you show the less your rates ought to be: didn't it seem so to you from his questions?

Mr. Wimbish: I would like to ask if this is an argument or an examination of the witness?

Mr. Dillard: Yes, in reply to Mr. Walter's argument, that is all,—purely an argument.

A. Well, I thought he was trying to absorb for the public the benefits of the expenditures.

Q. Can you understand any good reason why the lumber men should reap the rewards of his business sagacity and good judgment and that the only reward the railroad men should get from it would be to have rates pushed down all the time?

A. Well, I felt that as it was a partnership property, the improvements on the railroad ought and undoubtedly would stimulate improvements in the manufacture and sale of lumber, and we would all share relatively and fairly alike and the improvements are plainly to the benefit of the public so far as they increase the efficiency in the operation of the railroad. And they do that without any question.

Q. Mr. Walter also asked you if you ever remembered testifying at any rate hearings that rates were higher than they ought to be and should be reduced. You instanced at least one case, but what ordinarily happens before these applications for reduction ever get to a hearing before the Commission at all; when you are approached by people, claiming that a rate is too high, what course do you pursue?

A. Well, I have endeavored to look at the proposition from the standpoint of the shipper as well as from our own standpoint and following lines of cooperation to work out with him if we can, then and there, the solution of the problem. I might instance here that we had applications for reduced rates on coal before the Denver hearing was had, but there were differences obtaining between the various roads composing the through route, which, notwithstanding our efforts, it had been impossible to reconcile. That brought out the hearing. The hearing resulted in a further consideration of the differences and we got together. Now, if that had been a case on our own railroad there never would have been the hearing, but we had a third party entirely foreign to us in interest as far as ownership is concerned.

Q. Isn't it a matter of fact that prior to any hearing or threat in any way of the hearing, that from similar points of origin you had established rates that were perfectly satisfactory?

A. It is.

Q. And it was only by reason of these difficulties that you have referred to, that the hearing was had at all in the case in which you testified?

A. It was.

Q. In the great majority of cases, where complaint is made, isn't it true that there is either a readjustment of the rate or the complainant is convinced that his complaint is not well founded, so that comparatively few of the matters get to hearing at all?

A. That is right.

Q. Then, the bulk of the cases that get to hearing—the great majority of them—are those in which you have felt that your rates were right and ought not to be reduced?

A. Yes.

Q. In the bulk of the cases?

A. Yes. I may add here: for instance, one of the loudest complaints we have today and which has resulted in an order from the Commission reducing the scale, started with the man with whom rate reductions is a fad—not a shipper. He proclaims on general principles that rates are too high, makes the complaint, get the hearing, and the Commission's decision follows. In that very case the largest shippers involved have petitioned their senators even, at Washington, to file the protest of the community against the order of the Commission as promulgated. I merely mention that to illustrate that,

given an order by the Commission, it does not always follow that the complaint was made by interested parties.

Q. While it is very true, then, that the Commission does endeavor to be fair and does endeavor to take care (within proper limits) of the rights and interest of the public, it does not follow that in all instances they give such decisions as the public approves—the interested public—does it?

A. It does not.

Q. You stated that you did not claim to infallibility in the making of rates. Do you know any man who is infallible in the making of them?

A. No.

Q. Isn't it a very hard and difficult problem?

A. Very.

Q. Now, Mr. Teal, in questioning you with regard to the testimony of Mr. Miller and eliciting the answers which you gave, got your theory of rate making. You used an expression there which I think is illustrative, and very fairly so, that in making the rates it would be something like the stars in the night; you would always know they were shining but not have them constantly before your eyes or in your mind in the daylight. Now, if a man comes to you to make a rate on any article, you do not consciously stop and consider how much the road cost do you?

A. No.

Q. Nor how much it would take to replace it?

A. No.

Q. Nor what is the cost of service?

A. No.

Q. But all of those matters in a general way lie back of any action that you may take?

A. They do.

Q. So that in one sense they are not considered and in another sense they are?

A. That is true.

Q. You were also asked, Mr. Munroe, with regard to the putting up of the lumber rate, the increase in 1907. Do you remember how early this matter was first agitated in 1907?

A. Why, very early in the year; I don't recall the month.

Q. It was contemplated at first that the rates would be put in as early as the first of May, was it not?

A. Somewhere about there. I know it was months and months before—in fact, I think it was considered in 1906.

Q. The tariffs were prepared and the rate determined on before you knew there would be any panic?

A. Yes.

Q. And the tariff, possibly, even published?

A. I don't remember as to that.

Q. You referred to the fact that the lumber prices had at that time gotten to be exceedingly high, so high that you thought they were top heavy, and that there would have to be a tumble or a fall in those prices. Mr. Wimbish asked you whether or not, anticipating that there would be a lowering of prices, you thought it was fair to increase your rate. Had those prices reached a point which seemed to you at the time to be above normal?

A. I judge so, based on information as promulgated from time to time by the dealers.

Q. If then, they should be reduced to what would be a fair and normal price, as you anticipated, would that be any reason why you should not have raised a rate that you had already esteemed low?

A. It would not.

Q. Counsel for defendant also seemed to be vastly interested in the consumer. If those prices were at a very high rate and stumpage had gone up and up until it was at an exceedingly high rate, would the adjustment of the freight rate on a reasonable basis, of necessity, or indeed likely, in any way have interfered with the price to the consumer?

A. I think not.

Q. In your opinion would it have interfered in any way with a reasonable and fair profit on the part of the manufacturer?

A. It would not.

Q. Some questions were also put to you with regard to ladings and minima. Is it not a fact that minima are often established at weights quite a deal smaller than what the regular lading is? In other words, don't you often load beyond what the minima are?

A. Oh, yes, we do. We frequently provide in a tariff, for instance, at 60,000-pound minimum, but not in excess of the market capacity of the car. That is done simply to make available for transportation, cars of less than 60,000-pounds capacity that may be at the shipping point; but the tendency is to advance the minimum weights to correspond with the increased carrying capacity of the new equipment. There are no 40,000-pound cars made today. It would be regarded an extravagance to build them.

Q. I think I did not quite put my question clearly. Where a minimum is established at 30,000 pounds, as, for instance,

salmon, isn't it a fact that the lading is frequently in excess of the established minimum?

A. It is.

Q. In determining, then, the revenue which is realized from any car, the fair way of the determination would be to find what was the average loading of the car and not what was the tariff minimum?

A. That is true.

Q. I find that Mr. Teal in some of his comparisons took for the minimum weight of lumber 60,000 pounds. That minimum is established only on certain classes of cars, isn't it?

A. I think so.

Q. And, as nearly as you could remember it, your loading averaged something like 55,000 pounds?

A. Yes.

Q. Now, for instance, you take the minimum established on hops—it is 15,000 pounds, I believe—which was used by Mr. Teal in his comparison. I see, as a matter of fact, that hops often load 30, canned goods 40, dried fruits 40, wool 30, and green hides 30.

Mr. Walter: Are you testifying?

Mr. Dillard: Am I testifying?

Mr. Walter: Yes, as to the amount?

Mr. Dillard: I am stating what was given in evidence.

Mr. Walter: Oh, I thought that was a different matter.

Mr. Dillard: No, those are matters which were given in evidence.

Q. And those ladings are illustrative of what may happen in a car in excess of the minima, are they not?

A. They are.

Q. Now, if there is a less load to the single car, it would follow naturally that there can be more cars hauled in the train, would it not? That is, if you have a product which has a minimum or is loaded only to 20,000 pounds, and other products which are loaded to 60,000 pounds, the engine can draw more products of the lesser weight than—

A. Can draw more cars, you mean?

Q. Can draw more cars, I mean, of the lower weight than of the heavier weight, of necessity?

A. Yes, barring atmospheric conditions.

Q. Yes; I mean reduced, of course, to a theoretically perfect condition. You were also question with regard to the hauling of export and import traffic, and stated that in your opinion you doubted if it paid anything even beyond the cost of

service. So far as you know was that not recognized by all of our traffic men as being carried at an exceedingly low rate?

A. It was. I referred especially to the outward-bound movement to the Orient.

Q. I understand. And even then it was carried somewhat in the nature of a surplus product, was it not?

A. Practically all of it.

Q. And it was desired to build up, if it could be, an Oriental trade?

A. Yes.

Q. Was that not true?

A. Yes.

Q. Those rates were recognized, however, to use your phrase, as absurdly low. After the Commission announced its hearing in the Baltic Pool case, you stated they were removed. Is it not true that they were recognized as so absurdly low that it was thought it would be exceedingly unwise to establish them as a regular published rate?

A. It was.

Q. Before this time, as far as the in-bound rates were concerned, they were made at least for a long time on short notice, were they not?

A. They were.

Q. Under the ruling of the Commission, that method had to be abandoned and you had to publish a fixed, established rate, a rigid rate, for 30 days at any rate, in the tariff, and you thought that could not wisely be done at all?

A. Impracticable. The through rates necessary on the Asiatic in-bound were largely a matter of action in Hongkong. There would be two ships on the berth there, say one to go by Suez, one to go by the Canadian Pacific, or by any of the American boats, and it very frequently happened that the same commodity received today might take one rate and a condition might change it tomorrow—so that the same ship would have the same kind of freight at different rates as against the Suez competition, and it was so changeable that there was no rule of tariff that we could make fit that condition.

Q. You were endeavoring then to meet existing conditions and to built up a merchant marine?

A. That was the object.

Q. When the Commission found it necessary to decide that that was not permissible under the law—and I am not in any way criticising the decision at all,—when they found that that was necessary and that that traffic must occupy the same posi-

tion as to tariffs that other traffic occupied, you found it necessary to abandon it?

A. Yes, sir.

By Mr. Holden:

Q. Mr. Munroe, what are the competitive features of import and export rates?

A. Import rates—the most important article in-bound is tea. The highest rate we have been able to get as an average is about a cent and a quarter a pound, from what we call the Asiatic ports of call—Hongkong.

Q. Explain why that was the highest rate and what were the reasons which—

A. Suez competition.

Q. Explain just what you mean by that.

A. There is very much larger traffic by sea between the Orient and the Continent of Europe and the United Kingdom, relatively, than there is to this country across the Pacific, and the ships are on berth there all the time. The competition is very intense between themselves from causes entirely foreign to any American carriers; and if there was no Pacific Ocean, and if there was no railroad from the Pacific coast east-bound, why, we doubtless would have more or less of that extreme competition—something that is entirely uncontrolled and extreme. That applied as to the Orient. And we find that the same thing exists outward-bound. You take a ship on berth in New York that is scheduled for Hongkong; she advertises her date of sailing, and she finds today that she is short, we will say, 500 tons, and she is going to sail next week. She will take that 500 tons wherever she can find it, at any rate necessary to fill out; that is to say, they have their own conditions, they create an emergency which they fill out with, and do not have to report to anybody, do not have to ask anybody; they are free agents to do as they please. That is the kind of competition the rail lines meet in trying to handle overland traffic which can move wholly by water between the points in this country and the points in Asia.

Q. Now, taking that as a concrete case: here is a ship in berth in New York Harbor, with space for 500 tons. Now, that is a competitive shipment between that ship or other ships moving wholly by water to an Oriental port, and the American rail lines loading across the Continent to the Pacific coast and there trans-ship to some Oriental port?

A. Yes.

Q. Now, is it not a fact well understood that the ship's rates

in the New York ports, under those conditions, vary not only from day to day but at times from hour to hour?

A. That is true.

Q. And that one lot may be booked for shipment at one rate, and the next day the same kind of commodity may be booked at a wholly different rate, lower or higher as conditions might bring it about—

A. Yes.

Q.—in the mind of the master of the ship as to what rate he would make?

A. Yes.

Q. So that the agent of the rail lines seeking to secure those shipments, has constantly to meet in his rates the condition which he is confronted with by the ship's rates which I have referred to?

A. Yes.

Q. And that illustrates completely the character of competition that has affected these transcontinental export and import rates?

A. Yes.

Q. And the impossibility of fixing them by any published scale that can only be changed on a certain number of days' public notice, filed with the Commissioner at Washington and posted at railroad stations?

A. Yes.

Q. And that the interpretation of the law which has been put upon it, necessarily, perhaps, by the Commission, has practically forced the American railroads out of that business?

A. Yes.

Q. Now, in engaging in that import and export traffic at the kind of rates you have been referring to, was it not the purpose of the transcontinental lines, by beginning on the very low basis, to make the effort to build up a respectable and constantly growing tonnage in and out of the country from the Asiatic country?

A. Yes.

Q. In the hope that, as conditions grew, the rates might be ultimately brought to a respectable level?

A. Yes.

Q. And that hope has been disappointed?

A. Yes.

Q. Now, just one other question on that subject. You spoke about import business, for instance, from Hongkong, but the rate is made practically at Hongkong. It is determined by what will influence the traffic by a vessel crossing the Pacific to a Pacific port in this country and then rail movement east-

ward as against Asia from Hongkong all by water to the Atlantic coast, for instance; and has it not been the fact that the man at Hongkong has had to determine what the rate would be if he got the business for the Pacific coast port and that the railroad connecting with the Pacific port has had to take whatever it could get arising out of those conditions existing at Hongkong?

Q. Yes; we had an understanding for divisions and the rate making power was vested with the Hongkong committee. We did not know what the rates were until the ship arrived at San Francisco or Portland or Seattle, as the case might be. We would have varying rates on the same cargo between the same points.

Q. And it was not in the control of the railroads to say what they would get?

A. No. we didn't know.

Q. They could either stay out of the business wholly or take it, as you say, in the nature of surplus business for what it was worth?

A. Yes.

Q. Mr. Munroe, what has been the conventional figure among railroad men for charging up on company books for the cost of hauling railroad material?

A. Half a cent per ton per mile.

Q. 5 mills per ton per mile?

A. Yes.

Q. What is that supposed to represent?

A. Actual cost of movement.

Q. Actual cost of that movement. Has not that always been viewed as a minimum, as a charge for moving company material, without any idea of any profit in the movement?

A. Yes.

Q. For instance, the company moving its own fuel or its own material for construction purposes, owned by itself and moved by itself for use by itself?

A. Yes.

Q. That, for many years, was considered by accounting men and operating men as a minimum that would cover the bear cost of moving the company's stuff?

A. Yes.

Q. Now, you spoke two or three times, expressing the idea that the transportation of lumber, for instance, was properly viewed as a partnership between the railroad and the shipper and the consumer; and, if I understand you, your idea of this

lumber rate from the Pacific Northwest was that it originated and for many years was on an abnormally low basis?

A. Yes.

Q. The railroad in taking its share of the matter, or standing its share of the burden, had started in at a rate that was lower than, in your opinion, was a fair rate? Do I understand you? Your expression was that as the change came in the conditions of the lumbermen's business, the great increase in price, that you think it is fair that the railroad should share in that to the extent of getting its rate upon a reasonable basis, and no more?

A. I think so.

By Mr. Dillard:

Q. Mr. Munroe, have you there the per ton mile rate on lumber (I asked to have one gotten up at lunch) and other items? Mr. Wimbish wanted them.

A. Yes. Since the morning session I have obtained figures showing the average revenue per ton per mile on lumber of the Union Pacific system, which includes the Union Pacific Railroad, the Oregon Short Line Railroad and the O. R. & N. Company. The figures are as follows:

Year.	Mills per ton per mile.
1904	6.6
1905	6.59
1906	5.95
1907	6.24
1908	7.3

Q. Now give it on all business?

A. That is on all lumber over the system lines. Those are the figures.

Q. Mr. Wimbish also asked you what the rate per ton per mile was on all commercial freight.

Mr. Wimbish: I didn't ask that question, but I have no objection to it.

Mr. Teal: It is important to have it.

Q. Well, I will ask it now?

A. On all commercial freight—

Year.	Mills.
1904	9.7
1905	9.06
1906	9.15
1907	9.62
1908	1.003

Q. Returning to lumber, which we have brought in view, I find there that it was pretty regularly decreasing per ton per mile, was it not, down to nineteen hundred and—

A. 1907. 1904, '5 and '6 decreased; 1907 increased 29/100 of a mill.

Q. In 1907 there was an increase, a very slight increase in the per ton per mile on lumber. How was that year as to traffic?

A. One of the best in our history; and as to other traffic, there was an increase from 9.15 in 1906 to 9.62 in 1907.

Q. That was, then, brought about by the heavy business you did?

A. General development all over, that year of 1907.

Q. In 1908, I notice there that your per ton per mile jumps until it is considerably larger than it was at any other time?

A. 7.3 mills.

Q. How do you account for that?

A. The general depressed condition in 1908 resulted in the lumber dealers buying very largely from hand to mouth, from the nearest point of supply, often from jobbers, which meant a short haul for the Union Pacific lines. For instance, a man in Nebraska, 150 miles from Omaha, who normally might ride out to Portland, Oregon, for a car of lumber, in an emergency telephones Omaha to ship me a car of lumber tomorrow. Now, our revenue per ton per mile on the 150 miles is very much greater than it is on the haul from Portland. And that, in my judgment, explains the 1908 difference, because there was no material difference in that year in the rates in the aggregate from the various points of supply to the various points of consumption.

Mr. Wimbish: Pardon me just a moment. Mr. Munroe, in order that we may get the full value of your comparisons, would it be feasible for you to give the average length of the houl on lumber in each of these years and the average length of haul on all traffic?

A. I think we [illegible].

Mr. Wimbish: I would be very glad if you could.

The Witness: If we have the figures so prepared we will be very glad to give them to you.

Mr. Dillard: I was going to say this, Mr. Wimbish: If they are prepared, so we can do that, we will be very glad to do it; but if they are not prepared, the only way on earth that that could be done would be by going to the entire number of way-bills handling lumber, which would be an impracticable thing to do.

Mr. Wimbish: Oh, I don't ask anything—

Mr. Teal: I would like to have it in the record anyhow that the only fair basis of any of these comparisons at all is to get the basis on which they raised. Now, a short haul and a long haul are not comparable as rate matters.

Mr. Dillard: Of course not.

Mr. Teal: And simply to put in comparisons without explanation would mean nothing to a traffic man or anybody else who knew anything about the business.

Mr. Dillard: We are answering the request of your own side on that, Mr. Teal; you remember that we were asked to furnish these. If we can furnish the other we will be very glad to do it, Mr. Wimbish.

The Witness: There is one answer I made to Mr. Wimbish this morning that I wanted to add a litle to, with permission, as to the propriety of the railroads reducing the lumber rate on account of the depressed condition of the industry subsequent to the panic, which practically was November 1st. I said I thought it would have been a crime to have made a reduction. The idea I had in mind was this: there were a great many who, prior to 1907, had no fear at all of coming disaster. They went ahead and stocked up with the usual freedom and had these lumber lots on hand when the depression occurred. Now, having purchased from a firm in the west, the chances are they bought on time, and anything which would impair the credit of the buyer would naturally interest the seller. So, I have assumed on general principles that the policy, for instance, as adopted by the U. S. Steel Company, which many believe today did more to avoid panicky conditions than any other thing that happened, namely, of closing down their mills rather than attempting to run them by reducing prices, and when the reduction of prices meant impairment of credit of those who had previously purchased, it was wiser all the while to stop the production until the stocks on hand, bought in good faith, could be, under normal conditions, exhausted. And for that reason I think if the railroads had reduced their freight rate and the lumbermen had reduced their prices and offered their wares in consuming territory at a price below the cost of that on hand and waiting sale, that they would have injured the trade and their own industry much more than they could possibly have been benefited by increasing their shipments. So that I regard the closing of the mills subsequent to 1906 as one of the inevitable results of the panic and entirely foreign to freight rates, and I think it would

also have been a crime for them to have reduced materially their invoice the same way.

Mr. Wimbish: Do I understand you to mean, Mr. Munroe, that in the opinion of the carriers it was better to destroy the lumber manufacturer than to disturb existing prices and probably cause loss to dealers?

The Witness: Oh, no.

Mr. Wimbish: Wasn't that the effect of your answer?

The Witness: No. I claim that in refusing to reduce the prices, the lumber dealer in the west acted wisely and served his own interest; that if he had reduced his prices to operate his mill and make shipments and the railroad had reduced the freight rate, instead of losing the profit on the increased shipments he would probably have settled for 10 cents on the dollar on his previously unpaid bills. In other words, there was an obligation, commercial in character, resting absolutely upon the shipper, after having sold in good faith, not to turn around and make it impossible for that man to sell except at a great big loss.

Mr. Wimbish: Just preceding this advance had there not been for some months quite a car shortage?

The Witness: Yes, there had been more or less car shortage all during the year.

Mr. Wimbish: Isn't it true that at the time you gave this notice, or at the time of the panic, that these western manufacturers had large stocks on their skids that they could not ship because you had not furnished the cars?

The Witness: I never believed that. I don't believe it today.

Mr. Teal: Then, you were not out there?

The Witness: I think the car shortage—if we had had 50,000 cars empty, aavilable for shipment, it is my belief that not more than 15,000, as a maximum, would ever have been used. We have had the same experience, and I believe that they ordered far in excess of their ability to ship. We know from our own experience with other lines that they very frequently, in times of car shortage, order twice as many cars as they want, in the hope that they will get half what they need.

Mr. Wimbish: Do I understand you to say, Mr. Munroe, that in your judgment the lumber manufacturers and shippers were standing in the way of their own interest when they were clamoring for the taking off of this advance on lumber? In other words, that the carriers have superior wisdom and are charged with the duty of protecting the lumber dealers against themselves?

The Witness: No, sir, the carriers have no right to play favorites or exercise paternalism. They have an unquestioned right to their own opinion. They probably have not any more wisdom per capita than the individual who may engage in other lines of traffic. But the people who are engaged in the lumber business, if I am correctly informed, largely share the views I have expressed. There are some who do not, of course. But I think you would find that the dealers in the interior would be a unit on that proposition. I can understand why that might not be true in all cases among the shippers.

Mr. Wimbish: Then, you do not think the large number of manufacturers represented in the suits or complaints from Washington and Oregon fairly represented the views of the lumber manufacturers in this litigation?

The Witness: They may fairly represent the views at their end of the line, but they do not represent the interests engagd in lumber, which include the men who sell to the consumer as well as the men in the west who sell to the eastern dealer.

Mr. Wimbish: Then, in protecting the man in the east who does sell to the consumer, you were playing favorites, were you not?

The Witness: We were not protecting anybody. I contend this, Mr. Wimbish, that if our rates had been reduced one-half on November 1, 1907, it would not have induced the sale of an additional foot of lumber. Why? For the reason that everybody was frightened to death, and if lumber dropped $2 a thousand every man would naturally have said, "Well, the bottom hasn't come yet." In other words, you can't sell lumber on a declining market. You can sell it very easily on an advancing one.

Mr. Wimbish: Then, the reduction in the rate would not have resulted in any movement to the east, and hence it could not have affected the dealers in the east who already had their stocks on hand?

The Witness: It would have made the price in the east for the dealer to sell his lumber at a sacrifice. Simply a commercial condition, that is all.

By Mr. Dillard:

Q. Referring to the figures that Mr. Wimbish asked for a few moments ago, Mr. Wilcox thinks he can get them up. He thinks maybe he has data from which he can do it immediately. But right on that line, it is a fact, is it not, Mr. Munroe, before we put in these rates that Judge Hanford issued his injunction and that very little or comparatively little moved on the advance rates?

A. That is my understanding.
Q. No great movement on it?
A. No.
Q. Are you sufficiently advised as to the conditions in the west to answer this question: that after the Commission delivered their opinion and order reducing the rates, that still lumber did not move to any considerable extent?
A. That is my understanding.
By Mr. Teal:
Q. Mr. Munroe, the first question that was asked you in connection with the improvements on the Union Pacific was if you were familiar (that was about the effect of it) with the capital expenditures made in that behalf by your system.
A. I know there was a large amount of money spent, but I could not—
Q. I want about the capital expenditures. I mean are you familiar with the accounting department?
A. Not enough to testify, no.
Q. That is what I thought. You don't know whether it came from capital account, or whether it came from rates, or where it came from?
A. I haven't the information to testify about that.
Q. All you know is that a large amount was spent, from some source, in improving the system?
A. Yes.
Q. Now, in connection with the reduction of rates that you testified about, generally speaking, I will ask you if, in 1889, the rate from Portland over your system was not 40 cents to Denver, Colorado, Pueblo and common points?
A. I believe there was a time when that rate obtained, but I could not deny it was 1889; I think there was a rate at one time.
Q. I will ask you if in 1893 the rate from Portland, Oregon, to Council Bluffs,—Omaha, Nebraska, was not 45 cents, and that remained in effect until April 15, 1901?
A. I think there was a rate of that kind.
Q. And I will ask you if in 1901, April, that rate was not advanced to 50 cents?
A. Very likely.
Q. And then the next advance was in 1907, November, the last that was put in?
A. Yes.
Q. So that, so far as shipments from Portland and those points on your system are concerned, instead of there being

reductions in rates, there have been continuous advances; is that not true?

A. The advances are as set forth in those figures of which you speak.

Q. At the same time there have been these advances in the minimums; isn't that true?

A. Yes.

Q. So that so far as the lumber traffic is concerned, your remarks about the reduction of rates generally does not apply on your system, does it?

A. Well, we have made reductions on—we don't speak of lumber solely as coming from the northwest.

Q. No, I am speaking now of lumber.

A. So far as we are concerned we got away from that 40 cent rate as indicated in the record.

Q. Now, what do you understand this case is about? Do you understand this is a case where you are trying mill men for the profits they have made, or is it a case bearing upon the reasonableness of a rate for carrying a certain product?

A. On the reasonableness of a rate for the carrier.

Q. Yes, that is what I suppose. So that the question of the profits of the lumber men or the question as to whether stumpage has advanced,—those questions are really immaterial in a case of this kind, are they not?

A. Oh, no; no, they are incidental, but they are well worthy of our most careful consideration, and any shipper of magnitude, I think, would be quite willing to so accord the carriers.

Q. Then, as I understand it, the advances in the price of stumpage and the profits of the lumber men do enter into this rate?

A. They have a bearing.

Q. Yes.

A. I think, in other words, that the railroad man is not doing his duty if he allows an abnormal price for the production of an article, an abnormal price for the profit of the jobber, an abnormal price paid by the consumer, and his revenue is always at a minimum.

Q. I see.

A. In other words, I believe that a carrier is entitled to the fluctuations due to conditions just as much as the buyer or seller of an article.

Q. Then, I would like to get your opinion as to the value of these things. According to your idea, if there is a falling off in an industry, you think rates should be reduced accordingly?

A. Yes, sir, I think it is the duty of a railroad company to foster its industries down to the lowest possible point at which it can keep the industry alive, and I think it should also share in the profits when the industry is profitable, and that times change and we change with them.

Q. And that is your theory of rate making?

A. That is the commercial rate making.

Q. And you mean by commercial rate making, actual rate making?

A. Yes; the real, practical work.

Q. Yes, that is what I mean. You also stated that in most of these cases it is not shippers asking for reduction but it is something—

A. No, I said there frequently were cases —

Q. Now I want to ask you something about that. You referred to one case. You probably had in mind the George J. Kindell case, from Denver.

A. Yes.

Q. And the Denver Chamber of Commerce were the people who appealed to their senators, were they not?

A. Yes.

Q. Will you tell us why the Denver Chamber of Commerce did not want lower rates into Denver?

A. I do not think the Denver Chamber of Commerce would object as a body to any rate reductions made by the carriers; but the real meat of the Denver case is the obliteration, the wiping out, of base points. Now, Denver is vitally interested in being able to supply the trade west of it. The recognition of the Denver case meant the wiping of the Missouri river as a basic point, the same as the Burnham, Hanna and Munger case represented the wiping out of the Mississippi river. Those two basic lines being obliterated, Denver saw that her line would naturally have to drop out of sight, and the time was near at hand when Omaha and Kansas City, if you please, would ship right by to Denver, to Leadville, Grand Junction, Canon City—that the whole inter-mountain country, and that a man in Denver would be injured.

Q. Now, that is just what I wanted to know. Now, as a matter of fact—and I think you know it, Mr. Munroe,—it was a purely straight-up-and-down jobbers' fight; that in Denver they wanted to have the territory they were accustomed to having, without the competitive conditions of the east; isn't that true?

A. No, it is far beyond the jobbers.

Q. Then, will you explain to me how a reduction of rates

to Leadville and to that consuming territory can affect the consumers detrimentally?

A. The interest in Denver—of course the jobber is primarily affected. Every man, woman and child in Denver is interested in anything which tends to build that interest up. The people in Leadville are best served, so it is believed—

Q. So what?

A. So it is believed—

Q. By whom?

A. By those who have given a study to the subject.

Q. Well, who are they? The Denver jobbers?

A. The people of Colorado.

Q. You think so?

A. Yes, sir. I contend it is manifestly to the interest of every man, woman and child in the entire State of Colorado that they have within its boundaries as good, as large, as prosperous a commercial city as natural conditions justify. I contend it is worth a good deal to the man in Leadville to be able to telephone Denver in the afternoon and have his freight shipped that night. I contend it is just as necessary commercially, as it is for you, if you live in Leadville and are a man of family and one of your members is stricken in the afternoon that you be able to call a Denver surgeon right to you, quick. In other words, a man must not depend on an eastern city manufacturing boots and shoes, if you please, for his shipments. He has got to have a supply nearer at home. Now, Denver has grown up under those conditions. It never has been a burden to anybody. The Missouri river has grown up naturally. The Mississippi river has grown up under them. And there is not a man, woman, or child, I contend, west, using supplies purchased in those cities, that pays one fraction of a cent premium that you can disappoint by reason of the application of the basic principle. So, I say, that it is not entirely selfish on the part of the jobbers.

Q. Then, this case was a case where there was a reduction of rates ordered to an entire section of the country, was it not?

A. To Denver, yes.

Q. Well,—

A. Yes, it took the common points.

Mr. Walter: Didn't that order apply to Denver and Denver only?

The Witness: Denver and Denver only.

Mr. Walter: And not Colorado common points?

The Witness: The Commission's order was for Denver, but there were other features of the law. Given a rate to Denver, under the fourth section, the Denver rate would not be exceeded. We have not interpreted—at least I have not—the Commission's order as setting aside the effect of the fourth section of the Act.

Q. Well, at any rate, it reduced rates into Denver, did it not?

A. It did yes.

Q. And to that extent the consumers ought to get the benefit?

A. You would say so; they ought to, yes.

Q. Yes, that is what I mean.

A. And on principle they would.

Mr. Dillard: I think he has answered that fully in his testimony, don't you?

Mr. Teal: No, I don't think he has answered my question at all. He has made a very good speech, but he did not answer my questions.

The Witness: I don't believe the consumer gets one cent of it.

Q. That is right. Then, you think it doesn't matter what the rates are within certain limits—the consumer gets no benefit in reduced rates?

A. I think that is true of a great many commodities; in fact I know it is true of a great many.

Q. Suppose rates are advanced—who gets it then? Who pays it?

A. I suppose the people would pay it then, because the jobber would add it to his price.

Q. But on a reduction no benefit comes to anybody except the railroad—

A. Well, it is not always so in the case of an advance. I had a case in Omaha where a dry goods man paid 50 cents a hundred more than his competitor paid in Chicago, and he guaranteed to sell to the Omaha consumer the Chicago price. He said, "There is enough it in for me to absorb the 50."

Q. Well, he was in good shape, wasn't he?

A. He is hollering now for rates.

Q. I would like to ask you this: If, in your experience, it is not a fact that wherever there is a change asked in connection with what we might call rates to jobbing centers, where there has been a relationship existing between rates and other centers, which is generally the case, there are not

always intervening parties—I am speaking now of shippers, generally speaking—on the side of the railroad as against any change? Hasn't that been the fact quite often?

A. Yes, that is very largely true.

Q. So that, as a matter of fact, generally speaking, what is in your mind when you speak about these shipments, is the carrier and the shipper himself?

A. Oh, no; I am the consumer.

Q. You are for the consumer good and strong?

A. I am for the consumer just as much as I am for the shipper.

Q. For anybody? And the consuming public, individuals also, in this Denver case, are petitioning the Interstate Commerce Commission to raise the rates, aren't they?

A. No, they are not raising them. I don't know of any question that is so thoroughly misunderstood and misinterpreted as the case of freight rates and the assumption that an advance means an advance price to the consumer. That is not correct in every case. Sometimes it is and sometimes it isn't.

Q. Take, for instance, out in our country. Suppose you advance the rate on wheat up in eastern Oregon; what would be the effect on the price?

A. Take wheat?

Q. Yes, just take that as an illustration.

A. Take anything of that nature; why, it would have some bearing on it.

Q. Take it on lumber.

A. Take wheat and lumber and coal and things of that character, or take dry goods and lumber—

Q. I was speaking of these larger matters. Now, you said a while ago that 5 mills had always been considered in your railroad experience as expressing the actual cost of operation.

A. The haul for company freight.

Q. I don't care anything about the haul for company freight.

Mr. Dillard: Well, that was his answer.

A. We regard it as cost.

Q. You regard it as cost?

A. Yes.

Q. Are you prepared to give the elements that go to make up the 5 mills?

A. No, I am not; at this time I am not. We have men that are.

Q. You have men that are able to?

A. Operating men know more about that than I do.

Q. Will you give me the name of any man in your employ who is able to give the cost—the absolute cost of operation on a ton of freight?

A. No, I wouldn't say that. I say that we know in a general way we have expenses attending the movement of this freight. It might be very difficult to show the actual cost for moving any particular ton of freight between any particular point. But, generally speaking, the consensus of opinion is, born of experience and the custom, that 5 mills is fairly representative of the cost of movement, and that is the charge which we have based on in handling company material.

Q. Then, if there were large railroads in this country handling freight for very much less than 5 mills per ton per mile, you would consider they were headed for a receivership, wouldn't you?

A. Oh, no, I wouldn't say that.

Q. Why not?

A. Because there may be different conditions.

Q. Then, when you say that 5 mills per ton per mile on all the roads in this country represents the basis of cost, you don't mean that?

Mr. Dillard: He didn't say that.

A. I am speaking of the roads west of the Missouri river.

Q. Take the the Chesapeake and Ohio. Are you familiar with the operation of that road?

A. No.

Q. Are you familiar with its average rate per ton per mile?

A. I understand it is very low; I don't know what it is.

Q. Do you understand whether it is more or less than 5 mills?

A. I understand that their rate on coal is less than 5 mills, but I don't know what their general average is.

Q. And they handle enormous quantities of that, do they not?

A. I believe the ydo.

Q. Now, on this question of millage per ton per mile, I would like to ask you this: wouldn't it be a necessary effect or a necessary result that if you were operating a road, we will say, commencing with 100 or 200 miles, as you extended your road—I mean in mileage and in length—that the rate per ton per mile would continually grow less?

A. That would be the natural tendency.

Q. And that would not mean because the rate per ton per mile, on the average was getting less than that road was not making money, would it?

A. It would depend on where we finally landed.

Q. That is true. I don't suppose that you could make your haul long enough, even if you went around the globe, to make a rate of 1 mill per ton per mile. Now in theory it would be all right. You would go on 5000 miles, and the next 5000, but there comes a point below which you cannot go.

Q. That is true, of course, but I am speaking practically, as a matter of fact, on longer hauls the millage is small?

A. On the longer haul the rate per ton per mile is supposed to decrease with the decrease in the service.

Q. In other words, if you did not do it that way you could not haul any freight to the Pacific coast?

A. We recognize we cannot get as much per ton per mile for long hauls as we do for short hauls.

Q. You say, in your opinion as a railroad man, a traffic man, that 5 mills per ton per mile represents costs of movement on the Union Pacific Railroad—under oath?

A. I didn't say that. I said we have been assessing our company material on the basis of 5 mills per ton per mile. I do not know of any—I was going to say I did not know of any traffic hauled at less than 5 mills, but it may be possible in some cases we do not get that. I think we do, though.

Q. Now, what do you say, as an expert, and with your years of experience on the road, as to what is actual cost in handling traffic?

A. I don't know.

Q. You don't know

A. No, sir.

Q. You have no one in the employ of your railway who can tell, have you?

A. I don't know; I don't know of anybody that can tell. It is an ever varying quantity.

Q. And you never heard any one state positively on that, did you?

A. I don't recall.

Q. You don't know of any way that could be determined, either?

A. No, I do not; not to be of any value for the future, because the conditions are ever changing. What is true of yesterday is not true of tomorrow.

Q. So, this 5 mills is just simply used as an arbitrary measure for carrying company freight?

A. It is generally arbitrary, yes.

Q. Mr. Holden, in his questions, said something about soliciting this export and import business. Prior to those rates being taken out, was that business solicited by the various railroads?

A. Oh, yes.

Q. You wanted the business?

A. There is no rate too low for a solicitor.

Q. I see.

A. There cannot be.

Q. And those solicitors were in your employ?

A. Oh, yes.

Q. And you knew what they were doing?

A. It is the solicitor's business to work for freight regardless of rates.

Q. I see. But you carried it?

A. Oh, yes.

Q. The solicitor has not the power to make rates, has he?

A. No.

Q. He simply solicits for business on the rates?

A. He has got to assume there is some good reason for the rate having been made and the company wanting the business. I may add, when the rate was 2 cents a hundred by boat from New York to Galveston, I think there was increased efficiency in soliciting, because there is nothing more attractive to a solicitor than to be able to attract the maximum interest for the shipper, and if he can ever give him anything then he gets busy.

Q. Would you think as a traffic man, taking the average return on lumber from 1904 to 1908, which averaged from 6.6 mills to 7.3 mills per ton per mile as against from 9.15 to 10.003 per ton per mile on all freight, that that was disproportionate?

A. I haven't worked out those percentages.

Q. Well, I have just taken them down here.

A. There was an increase—well, let us see—from 5.95 to 6.24—that is 29/100—in 1906 and 1907, respectively.

Q. Well, 1908?

A. 1908 was a larger increase. I regard that 1908 increase as abnormal.

Q. But you also had an increase in your others in 1908?

A. Yes. You see it has increased substantially, say, one-sixth. One was 88/100 increase on general business and the other was 29/100 on lumber.

Q. Now, the point I make—

A. That is about the relation. Three times as much, I think.

Q. Taking the whole rate situation from 1904 to 1908, as a traffic man, would you expect to get a greater amount for lumber as in relation to the amount on all your commercial freight than that shows there?

A. Yes, I would.

Q. You would? Why doesn't that include all your less than carload business?

A. I will tell you why.

Q. Well, does it include all your less than carload?

A. It includes our whole business.

Q. It includes your whole business on all your rates?

A. I say yes, and I will tell you why. I think the lumber rates in themselves are much nearer rock bottom than merchandise rates are, and I think from now on, say for the next ten years, we will have to face reductions on other commodities, without any corresponding reductions on lumber. So that the spread, if I may use that term, existing today between lumber and other commodities is bound to be narrowed by reductions on other commodities. Now, if we have a lumber rate, if you please, of 25 cents between two given points, and a machinery rate of 50 cents, I think that 50 cent rate will naturally come down faster than the lumber rate will come down; it may come down without any change at all in lumber. So that the percentage would seemingly show up against lumber, when in reality it is just a changed condition applied to other freight.

Q. You think the other rates will be lowered?

A. Yes. I think lumber is down about rock bottom.

Q. Now, you advanced a good many terminal rates to the coast, didn't you, January 1st?

A. We advanced some. Probably got to put them back, even lower; everything indicates it.

Q. That's fine.

Mr. Dillard: I don't know whether it is or not. We may all be out of business.

The Witness: I have known a community to petition the railroad to raise the rates, or they would be ruined.

Mr. Teal: There haven't been any handed me lately.

Q. Under the heading "Products of mines" what is covered?

A. Oh, all coal, coke I suppose would come in there, all ores of every kind and character.

Q. That represented last year a trifle over 34 per cent. of the business of the Union Pacific Railroad Company, 26 per cent. of the business of the O. R. & N., and 47 per cent. of the business of the Oregon Short Line. Now, I would like to have you prepare a table covering ores and coal, giving the rate per ton per mile, for the same series of years that you have on lumber, and have it made a part of this record. It may show more or it may show less, but I would like to see what those do show.

Mr. Dillard: If we have to prepare it it will take too much trouble. If we have it we will furnish it.

Mr. Teal: As a matter of fact I think you have it.

Mr. Dillard: Then, if we have it we shall furnish it.

Mr. Teal: I ask that it be furnished anyhow. I think we want to get some of those things down.

Mr. Dillard: It simply depends on the amount of labor whether we will do it or not.

Mr. Teal: No, I don't think so. I think it will depend on an order of the court whether you will do it or not.

Mr. Dillard: I don't think the court will enter any such order.

Mr. Teal: All right. I shall ask, then, that there be filed in this case a statement covering the same period, the same series of years, as covered by the lumber, the rate per ton per mile received on the Union Pacific system on ores, and the rate per ton per mile received on coal.

Mr. Dillard: If we can furnish it we will be glad to do it, but if we have got to get it from waybills—

The Witness: If we have any figures, I think they can be combined. I think probably that would answer your purpose.

Mr. Teal: I have in cases had them handed to me without any difficulty at all.

Mr. Dillard: Well, you won't have any now if we can do it conveniently, but I have made one rule, and that is that I don't intend to put a lot of men to work simply to give evidence to a man on the other side. If I can get it in any reasonable way, I will do so.

Q. Now just one question on this revenue from cars. In connection with the minimum that is carried on hops and on

lumber and wool, etc., in order that there may be no just general statements made about what is carried in the cars, could you have prepared a statement for any month which you choose (I mean where hops and those things move) showing an average loading on hops, on hides, on wool, and on canned goods? I believe those are the ones that I used?

A. I think so.

Mr. Dillard: Just for a month, you want that?

Mr. Teal: Well, whatever the length of time.

Mr. Dillard: We can get that up, of course.

The Witness: I think we can give you our average.

Mr. Dillard: But when it comes to four years, it is quite different.

Mr. Teal: Whatever length of time that Mr. Munroe himself will say fairly illustrates the loading of the commodities referred to. I am quite willing to take your statement for that.

The Witness: I think our average on wool from navigation points is about 35,000 pounds.

Mr. Dillard: We will get that for you, Mr. Teal, with pleasure.

Mr. Teal: All right. Thank you, Mr. Dillard.

Mr. Dillard: Mr. Wilcox tells me he is satisfied we can get those other figures, and we will be glad to do it.

Mr. Teal: I am quite certain you can, because that is really important for you to know yourself, and no system on earth has got it down as fine as this one. I'm not joking.

Q. You were speaking a while ago about not believing that the amount of lumber piled out west in the yards, waiting shipment was as has been said, Mr. Munroe.

A. No, I said I did not believe that they had the orders for all the cars that they said they would load.

Q. Oh, I see. But I was speaking about the—

A. I have no doubt that the piles of lumber were very much higher than the orders would call for.

Q. But as a matter of fact, there was all through 1906 and 1907 a very severe car shortage all over the country, was there not?

A. That is true, yes, sir.

Mr. Dillard: I read into the record now the figures which are requested by counsel for defendants. I give the average haul of lumber for the fiscal years ending on June 30, 1904, to 1908, inclusive. They are as follows:

For 1904,	591.10	miles
" 1905,	592.20	"
" 1906,	722.59	"
" 1907,	706	"
" 1908,	559.88	"

The Witness: That bears out my assumption.

Mr. Teal: It bears out my theory, too, on the long haul.

The Witness: Well, we are both happy, then.

Mr. Holden: Which is the better—a theory or an assumption?

Mr. Dillard: Now, then, I give for the same periods the haul on all commercial traffic, showing that on other commercial traffic, while the rate per ton per mile increased, that there was not a corresponding decrease in the length of the haul, and the figures read, for the same periods, as follows:

For the fiscal year 1904,	394.87	miles.
" " " " 1905,	430.31	"
" " " " 1906,	410.27	"
" " " " 1907,	404.67	"
" " " " 1908,	402.77	"

Mr. Examiner, and gentlemen, I shall probably a little later desire to file certain information as to the stock, bonds, outstandings, and so on, of the lines involved in this suit. They are matters which I think could all be figured out from the annual report, and it may be that I will find the annual report sufficient without doing that. On the other hand, it may be that I can get that in much better shape by putting them just in tabulated form; and if so I will probably file these later.

Mr. Teal: We, of course, reserving the right to call witnesses on that subject.

Mr. Dillard: Oh, certainly.

Mr. Teal: And examine them.

Mr. Dillard: Of course I will furnish you with them if I do find them.

Mr. Wimbish: Getting back to the other proposition for a moment, would it be feasible and convenient to show with reference to all traffic the percentage moving in carloads and the percentage in less than carloads, and the same for these years.

Mr. Dillard: Let me ask some of our traffic men. Mr. Munroe, you or Mr. Wilcox will probably be able to answer that question.

Mr. Munroe: What was it?

Mr. Dillard: Mr. Wimbish desires to know if it will be convenient, if we have the figures so that we can show for these same years, commencing in 1904, and ending in 1908, the percentage of carload and the percentage of less than carload traffic.

Mr. Wilcox: No, we haven't that information.

Mr. Teal: May I ask this question? Those two figures now that are given us, shows the movement of lumber,—that is the mileage,—and it shows the movement of all traffic which includes that of lumber. Now, have you got separated all of the traffic except the lumber, so as to show how long that movement was?

The Witness: No; the average takes the whole. We have got some information on the other commodities which Mr. Dillard has there.

Mr. Dillard: Yes, we have these to read to you,—the figures we had when we had our row about some—

Mr. Teal: I didn't have a row; you had the row.

Mr. Dillard: Well, I know—a row about nothing. I had these right in my hand. These Mr. Wilcox did. We have to keep those straight as we go along. Shall I read that now?

Mr. Teal: Yes. Who were these examined by—Mr. Wilcox? I may want to examine on these.

Mr. Dillard: Yes; but he only gets them from our reports. I don't know that he could tell you anything about them. They are furnished originally by the auditor.

Mr. Teal: What are you going to read first, Mr. Dillard?

Mr. Dillard: I now desire to read the per ton per mile revenue on coal and ore for the fiscal years 1904 to 1908, inclusive. Coal is divided into "Coal, anthracite," and "Coal, bituminous." I read first, "Coal, anthracite:"

1904,	1.07
1905,	1.06
1906,	1.062
1907,	.938
1908,	.779

Bituminous coal next:

1904,	.57
1905,	.551
1906,	.554
1907,	.627
1908,	.662

Ore:

1904,	.65
1905,	.601
1906,	.61
1907,	.644
1908,	.663

The Witness: That is from the three lines?

Mr. Teal: That is the three lines, yes. A system, so I understood,—the Union Pacific system.

Mr. Dillard: Yes, that is right.

Mr. Teal: Have you got the amount of anthracite as compared with bituminous?

Mr. Dillard: The full?

The Witness: It is very small.

Mr. Teal: I know the anthracite is very small; that is what I want to show.

The Witness: About one per cent. of the soft coal.

Mr. Teal: Do you know the percentage of anthracite movement, Mr. Munroe? I just want it in the record?

Mr. Wilcox: The percentage is not figured out here. In 1908, 30,000 tons of anthracite; 2,700,000 tons of bituminous, that is about the rate of it.

Mr. Dillard: That would be about 1½ per cent.

Mr. Teal: See if this would suit, Mr. Dillard. It is stipulated that the movement of anthracite coal in 1908 was about 30,000 tons; the movement of bituminous coal about 2,700,000 tons; and that is fairly illustrative of the movement of the two characters of coal over the system. Is that correct? I understood Mr. Wilcox to state that.

Mr. Wilcox: Yes.

The Witness: Yes, our anthracite was very very small.

Mr. Dillard: That is all that I personally have to offer for my lines at this time.

Mr. Holden: I would like to ask Mr. Woodworth a few questions at this time.

J. G. WOODWORTH, being duly sworn as a witness on behalf of the complainants, testified as follows:

Direct Examination by Mr. Holden.

Q. Mr. Woodworth, you are traffic manager of the Northern Pacific?

A. Yes.

Q. And how long have you been connected with railroad traffic matters?

A. I have been in positions where I had to do with the making of rates for about 20 years.

Q. Well, generally speaking, are you familiar with the rate situation on the Northern Pacific lines?

A. Yes.

Q. And from your experience have you become familiar with the movement of lumber over that line?

A. I think I am fairly well acquainted with it.

Q. You have already testified in this case before the Commission?

A. Yes.

Q. I would like to direct your attention to certain of the tables of rates introduced at the hearing before the Commission by the witness Mr. Anderson, that are shown in the volume filed as an abstract of evidence by the complainants in the cases before the Commission, beginning on page 112.

Mr. Walter: What is the number of the exhibit?

Mr. Holden: I haven't got the number of the exhibit; but it is entitled "Table 3," and it shows certain comparisons of white pine rates over Hermansville, Michigan, with rates from Portland, Oregon, over the O. R. & N. line, for equal distances. About where is Hermansville, Michigan?

A. It is in the northern peninsula of Michigan; I don't know exactly where.

Q. It is east of Wisconsin?

A. Yes, sir.

Q. And, of course, east of Minnesota. Where are the points referred to in the table in Minnesota and North Dakota? In what direction from Hermansville, generally speaking, I mean?

A. They are west from Hermansville, and located on the Soo Line.

Q. Will you state briefly the conditions surrounding the movement of lumber, if there is any, from a point like Hermansville into Minnesota and North Dakota points which would bear on the rates shown there?

A. The lumber rates generally from Northern Michigan and Northern Wisconsin are blanketed, as we term it, because the movement is generally in the direction of Chicago, and the distances are approximately the same, and for the purpose of making rates to the western territories, the railroads, for some reason which I cannot fully explain, have blanketed the territory in connection with those tariffs as well, probably because they wanted to put all the mills on an equal basis. Hermansville is one of the most distant points from this Dakota territory which could be found in this group of Northern Wisconsin and Northern Michigan points.

Q. Well, would the haul of lumber from a point like Hermansville, remote towards the east, be right through Wisconsin and Minnesota lumber districts?

A. Yes. If any lumber were shipped from Michigan points to North Dakota, it would come in competition with lumber shipped from the Minnesota mills, and points like Bemidji, Crookston, Little Falls and Cloquet, and when they got further west, in Dakota, out to Minot, for instance, they would meet the competition of lumber shipped from Western Montana. The rate would be influenced by those conditions, and would also be influenced by the rates which are made from Minnesota points like Cloquet; some of those rates having been established by state authority.

Q. Well, points like Cloquet and such Minnesota points as you have mentioned are much nearer the Minnesota and North Dakota destinations than any such points as Hermansville?

A. Very much nearer.

Q. And what effect would that have upon the rate from a remote point like Hermansville?

A. Chicago being the basing market, and the rate from these Northern Wisconsin and Michigan mills, and from these Minnesota mills to Chicago, being approximately the same, the price of lumber f. o. b. cars at these Minnesota points and at these Wisconsin and Michigan points, would be about the same. Therefore, I don't see how these mills located in Northern Wisconsin and Northern Michigan could ever ship any lumber to these points in Minnesota or North Dakota; and however low the rate may have been fixed, so long as it was higher than the rate from the Minnesota mills, it would seem

impossible for any lumber to move from these points in Northern Michigan, and it is my understanding that none does move.

Q. That is what I was going to ask—if you had acquired information to determine whether there is any actual movement from a point like Hermansville, over the Soo Line, to these Minnesota and North Dakota points?

A. I asked the question of the general freight agent of the Soo Line and was told that no soft lumber had been shipped from that district; there might have been some maple lumber.

Q. Some maple lumber, which is a hard wood?

A. A hard wood.

Q. And so, so far as soft lumber, or lumber which would be spoken of as the kind that fir lumber from the coast is, these rates from Hermansville to such Minnesota and North Dakota points as were shown, would be characterized as largely, if not entirely, paper rates?

A. Entirely so; and I don't think any comparison based upon those rates would be instructive.

Q. Now, the witness prepared this table showing rates from Hermansville to the points we have been speaking of, in one column, with rates from Portland, Oregon, over the O. R. & N. lines, to stations in Idaho, chiefly, of equal distance. Taking, for instance, as an illustration, he shows the rate from Hermansville, Michigan, to Carrington, North Dakota, a distance of 673 miles, as the comparison with a rate from Portland, Oregon, to Mindoka, Idaho, of the same distance. Will you state whether a comparison of that kind offers any basis, in your judgment as a traffic man, for a consideration of the rate from Portland, Oregon, or the rate from Hermansville to Carrington?

A. I don't think it would, because the rates from Hermansville to points in Minnesota and North Dakota would necessarily be on a very low basis to meet the competition of Minnesota or Montana mills; whereas, there are no conditions which would make it impossible to establish and maintain the normal rate from Portland or other points in Oregon to these stations in Idaho, except as they might be affected under the fourth section by rates made to points like Ogden and Denver.

Q. By that you mean that the rates to intermediate points between Ogden or Denver, running back toward Portland, would be no higher than the rate to the Denver or Ogden point?

A. Yes, sir.

Q. By resject to the fourth section of the interstate law. Well, if I understand you then, you do say and express the opinion that the circumstances and conditions which would affect the rate from Hermansville to the points shown in the first column of this table, are wholly different from those which affect the rates shown in the second column, from a point like Portland to these small Idaho interior points?

A. Entirely different.

Q. And looking through the subsequent tables, in Table 3 and Table 4, all of which seem to be devoted to Hermansville rates, would you state generally that you would express the same opinion as to those as you have already as to the first set of rates?

A. Yes, sir. And I don't think any comparison of rates, according to distance, is of any value, except as it may take into consideration the volume of business and the conditions which dictated the rates.

Q. Now, just what do you mean the conditions?

A. For illustration: these tables deal very largely with rates from points in the Southern States to Chicago and St. Louis, which, at the time of their original establishment probably represented the highest rate that was obtainable on that basis, in view of the competition which the southern lumber met in those markets, as explained by Mr. Munroe this morning.

Q. Now, I would like to dwell just a little bit on those conditions. I wish you would explain, according to your understanding, what the conditions were, and have been affecting all-rail rates on lumber from the northern white pine district to such markets as Chicago, St. Louis, and that interior country?

A. I first had to do with these rates east bound from Oregon and Washington in 1887, and at that time the lumber from Wisconsin, Michigan and Minnesota practically controlled the markets in the Middle Western states. It was distributed from Chicago and the principal Mississippi river crossings of the Iowa trunk lines, and controlled the markets as far south as St. Louis, and controlled the markets of Kansas and Nebraska, and we encountered it even in Colorado. It was shipped as far west on the northern lines as Montana there, there being no development of the lumber business to any extent in Montana at that time. Any rates made from the south, or any rates made from the west into any of the territory I have described, took into consideration that competition, the price obtainable for the lumber in that territory.

Q. Would it have been possible to have made a rate from the coast lumber producing country that did not recognize the competitive conditions of northern and southern pine in this middle western country, and permit the western man to sell at prices that would meet that competition?

A. That for many years was the sole basis for the rate, and the further back you go the less lumber will be found moving from the west; and I recall very distinctly the repeated complaints we had to the effect that the rate was not low enough to enable them to compete with the northern lumber.

Q. Now, I would like to have you analyze a little bit the conditions that bore upon the making of rail rates from the north, the white pine rates down to Chicago, in competition with transportation on the lakes, and by the floating of logs down the Mississippi river. That was covered to some extent by Mr. Munroe, but I would like to have you state your understanding of those conditions?

A. Chicago was the original distributing point for lumber for this entire western territory, the supply being received by way of the lakes, principally from Lake Michigan ports, and then later from Lake Superior ports,—Duluth and Superior. Then these mills were operated along the Mississippi river, being supplied with logs that were floated down the Mississippi river, and its tributaries, and then a little later they began sawing the lumber in the northern states and shipping it direct. That was the condition up to about 1893 or 1894, and then the price of the northern lumber began to go up gradually, by reason of its being cut off and costing more to bring the logs to the mills, and other conditions, with which everybody is familiar, and that increase in the cost of the northern lumber delivered at all of these various destinations in the middle west continued, and the tables which were filed at Washington show that there was an increase of practically 100 per cent. in the 11 years prior to 1907, f. o. b. Minneapolis, using that as the illustrative point.

Q. You mean increase in the price?

A. In the price of the lumber at Minneapolis. Now, the cost of delivering lumber by schooner at Chicago, was, and always has been, the basis for the rail rate from Wisconsin and Minnesota points to Chicago, and the rates from Wisconsin and Minnesota points to St. Louis and to the territory lying west of the Mississippi river, were originally based upon the cost of floating the logs down the river, or floating lumber down the river, and distributing it at points like Clinton, Burlington, Keokuk.

Q. What influence on a rail rate does the transportation of lumber by schooner from the head of the lakes to Chicago have?

A. As I say, it absolutely fixes the rate obtainable, say, from Duluth to Chicago. That is the reason today that the 10-cent rate made by the Duluth-Chicago lines—

Q. Transportation by schooner in that way is at the very lowest kind of cost, is it not?

A. Yes, sir.

Q. And that influence is maintained and continues today and is shown in the low 10-cent rate that the rail lines have to establish and continue from St. Paul to Chicago, in competition with this low transportation by the lakes?

A. Yes, sir. It has been very well illustrated by the fact that from interior points in Minnesota, which are no further from Chicago than is Duluth, but which are not exposed to this lake competition, we get higher rates according to the cost of shipping that lumber from those mills to Duluth.

Q. Now, speaking about the floating of logs down the Mississippi river; as I understand it there were saw mills at various points along the Mississippi river clear down probably to St. Louis. Those mills obtained their logs at the bare cost of floating them down the river; they saw them into lumber and then ship them out into the interior country at the varying distances, which were short in comparison with the distance from the northern source of supply of logs?

A. That was the original condition.

Q. And the Minnesota manufacturer of lumber, who manufactured it either in Minnesota or Wisconsin, up close to the logs, or close to the woods, had to have a rate that would permit him to sell his lumber down in Iowa, for instance, in competition with the manufacturer at a point like Burlington, we will say, who had floated his logs down the river and manufactured his lumber there?

A. Yes, sir. The rate from Wisconsin and Minnesota points to Omaha, for instance, would take that into consideration, as it would also take into consideration the rate from Chicago and the cost of lumber delivered from Chicago, the same having been brought into Chicago by the lakes. That was the original condition.

Q. Now, under all of those circumstances bearing upon the rates which the railroads were able to get in hauling lumber from the north, what effect did that have upon the rates as to the character of the rates, whether they were low or otherwise?

A. Of course it resulted in what might be termed abnormal rates,—rates that were below the standard. The rates were lower than would have been made had lumber been shipped from Wisconsin and Minnesota points to these destinations without encountering any competition.

Q. In other words, is it a fair statement to say that they were such rates as the railroads were able to get in meeting this competition of low cost of transportation by the lakes and by the floating of the logs down the river?

A. That is a correct statement.

Q. And rates made by the water competition in that way directly bore upon and influenced the all-rail rate which the carriers were able to obtain?

A. Yes, sir; and of course that was also true of the rates made from the south, because the southern manufacturer was obliged to sell his lumber at a price necessary to meet the competition of this northern lumber.

Q. Is it a fact or not that when yellow pine began to come from the south to meet northern white pine in competition, that there was a prejudice against yellow pine—that it was not thought to be as good a lumber as the white pine?

A. That is true.

Q. And the railroads, as well as the manufacturers of lumber in the south, and the railroads bringing lumber from the south, had not only that prejudice to overcome in order to market the southern pine, but also had to meet these low rates from the north which had been made low by the lake and river competitive conditions you have referred to?

A. Yes, sir; just the same as the lumber from the west.

Q. And coming now to the condition that existed in this middle western country, including Kansas and Nebraska, influenced by the conditions you have referred to, those were the conditions, or at least some of the conditions, which had to be met by the railroads coming from the Pacific northwest, in order to give a rate which would permit the Pacific coast lumber men to meet this kind of competition and sell his lumber, as against white pine, as long as it lasted, and as against the yellow pine?

A. Yes, sir. When we found we couldn't carry lumber from the west at what might be termed normal rates, those conditions were the sole and only basis for the roads from the west.

Q. And the railroads did not have the opportunity of determining what the rate should be free from those conditions that you have referred to?

A. No, sir. The lumber could not have moved from the west under what I would consider normal rates.

Q. At and for some time after the rates from the Northwest were made in 1893, what was the feeling in the interior country as to the character of fir, in comparison with white pine or even yellow pine?

A. The Pacific coast manufacturers had to overcome a prejudice against their lumber. It was more difficult to work, and it took a long time to gain recognition for those things about the fir lumber which make it superior to white pine or yellow pine, for certain purposes, and until they had educated the trade and gained recognition for the merit of the lumber, they were obliged to make relatively low prices. The situation in that respect was very much the same as that with which the southern manufacturers were obliged to meet. I might say that there is still the same preference for white pine for certain purposes; and the only reason that other kinds of lumber are being used is because of the extreme high price of white pine. Carpenters, for instance, prefer the white pine; it is easier worked.

Q. White pine, of later years, has commanded a better market for eastern shipment, has it not, than for shipment into this middle west?

A. Yes, sir, and for special purposes, manufacturing purposes.

Mr. Holden: That is all I have to ask.

An adjournment was then taken until the morning of Saturday, April 24, 1909, at 10 o'clock, at the same place.

Room 627 Federal Building, Chicago, Ill.
April 24, 1909, 10 A. M.

The hearing was resumed before the special master, Hon. Frederick N. Dickson, at the above time and place.

Present:

On behalf of the complainants, Mr. Hale Holden, Mr. Charles Donnelly, Mr. F. C. Dillard.

On behalf of the defendant, Mr. Luther M. Walter, Mr. W. A. Wimbish, Mr. J. N. Teal.

J. G. WOODWORTH, recalled:

Cross-Examination by Mr. Teal.

Q. Mr. Woodworth, in testifying last evening about some of these rate tables prepared by Mr. Anderson, you did not wish to be understood that the mileage given, and the rates given, or the rates per ton per mile, are incorrect, do you, or misstatements of facts in the tariff?

A. Oh, no.

Mr. Holden: Just a moment. You mean correct at the time they were—

Mr. Teal: Well, we are all speaking now as of that time.

Q. How long have you been with the Northern Pacific railroad?

A. A little over four years.

Q. You are reasonably familiar with its operation prior to that time, are you not?

A. Why, not except as I might have knowledge of it—

Q. That is the way I meant.

A. —by reason of my connection with other railroads in the territory.

Q. The earnings af the Northern Pacific since its reorganization have constantly increased, have they not?

A. Yes, sir.

Q. Both the net and the gross?

A. Yes; until this last year.

Q. There was a slight decrease, then, in earnings this last year over the year 1907?

A. There was a very large decrease in the earnings, say, for the calendar year 1908.

Q. Do you know what the earnings of the Northern Pacific were, for the calendar year 1908—the net?

A. No; I could not state them exactly.

Q. They were sufficient to pay much more than a 7 per cent. dividend and carry considerable surplus and maintain the road, weren't they?

A. They were sufficient to meet all our charges and leave something to surplus. The decrease in the gross for the calendar year was something like $3,000,000.

Q. But you also decreased your operating expenses, didn't you?

A. Yes, sir.

Q. The Northern Pacific, in the last eight or nine years has been very greatly improved—the roadbed—physically, I mean, has it not?

A. Yes, they have spent large sums of money.

Q. Many millions of dollars, have they not?

A. And much more to spend.

Q. What is that?

A. They have spent large sums of money and must spend much more.

Q. But, as a matter of fact, it is greatly improved over what it has been?

A. Yes, sir.

Q. And the improvements are going on constantly?

A. Yes, sir.

Q. Now, the same facts obtain as to the Northern Pacific as do to the U. P., that you are carrying heavier trains, are you not, than formerly?

A. Yes, sir.

Q. Larger cars?

A. Yes, sir.

Q. Heavier loading?

A. Yes.

Q. The fact is that there have been increased economies and efficiency in operation on the Northern Pacific just the same as there has on the Harriman roads, have there not?

A. I think so.

Q. Now, taking the whole body of rates of the Northern Pacific do you figure that you get a reasonable return on the whole body?

A. With the conditions as they have been up to this last year, I should say yes. I think there might be some question about that, measured by the conditions in business of today.

Q. Generally speaking, then, you would say that your rates are fairly remunerative, as a whole?

A. Why, yes; if we could take our rates as they are today,

and they can be continued without change, I think we could get along.

Q. Now, taking this lumber rate specifically: you don't claim, Mr. Woodworth, do you, that that is a rate that does not produce cost of service on your road?

Mr. Holden: Which rate do you mean? The old?

Mr. Teal: The old rate.

Mr. Holden: The old 40-cent rate.

Mr. Teal: That is the one that is effective now.

Mr. Holden: No.

Mr. Teal: I mean the rates that you are acting under; the rates in effect prior to the advance. Do you claim they did not pay cost of operation?

A. Under the changed conditions as to empty car movement, I think there was very great question as to whether the 40-cent rate on lumber paid the cost when the business got above a certain volume, and it is very difficult to say just where that would begin.

Q. All of your rates on lumber were not a 40-cent rate, were they?

A. No.

Q. Then, I say, take your lumber traffic as a whole. Would you state that your lumber rates as a whole were remunerative or not remunerative?

A. I think our lumber traffic as a whole, including the short haul business, paid the cost of service—if that is the question.

Q. Well, that wasn't just the question. Would you wish to be understood as testifying, Mr. Woodworth, that on your roads the lumber business as a whole did not pay more than cost of service?

A. No, I couldn't say that.

Q. The lumber business has been a very large part of the business of the Northern Pacific during all of the years that it has been in operation since its organization, has it not?

A. You mean this Pacific coast lumber business?

Q. No; its lumber business as a whole?

A. Yes. It is the largest single item that we have. This Pacific coast business that is now in question has never represented more than 13 per cent. of our freight revenue.

Q. But it did represent about 13 per cent. of the freight revenue?

A. That is the highest figure it ever reached.

Q. Have any of the rates on your road during this same

period been less per ton per mile than lumber rates, on an average?

A. There may be some other rates in which we joined with other roads covering the transportation of coal and possibly some ore rates that would be less. But no important volume of business. And I could not name anything that was less. But I think there might be such cases.

Q. Could you make up a statement showing the average returns on your lumber in the same years that was made up by the Union Pacific yesterday, omitting rates on logs?

A. No. We do not make such statistics as those offered by the Union Pacific yesterday.

Q. You do have a very low log rate, do you not, in the west to the mills?

A. Yes, it is low.

Q. And that is hauling the logs to the mill and then having the lumber hauled away?

A. In most cases, yes.

Q. And are you familiar with the rates on lumber, an average rate per ton per mile, through Washington, on local business?

A. I never worked it out on the ten mile basis. I am fairly familiar with the rates.

Q. Would you call those rates remunerative rates?

A. Yes.

Q. This log haul has always entered into your statistics that you furnished on the lumber haul, has it not?

A. What statistics do you refer to?

Q. For instance, in this case there were some tables prepared showing the earnings on lumber, the rate per ton per mile, etc. The log haul was all figured in on that, wasn't it?

A. I don't think I know the statement to which you refer.

Q. Mr. Johnson prepared some statements; and don't you remember that on the examination of their Mr. Johnson that Mr. Prouty asked him if that did not include the haul on logs as well as on lumber, and that Mr. Johnson said it did?

A. I remember some such discussion, and I think he filed some supplementary statement, or made some explanation. I don't remember what it was.

Q. Mr. Johnson's statement, Exhibit 10, showed statements showing tons of lumber and other various products carried, and revenue on the same. Forest products cover logs, do they not?

A. Yes, sir, in the general classification.

Q. That is what I mean. So that in arriving at the rate

per ton per mile which you receive on lumber—logs being essentially a raw product—it would be fair to figure that in, would it, Mr. Woodworth, to arrive at a rate on lumber?

A. No. If we were discussing lumber rates, I think we should separate the rate on logs and lumber.

Q. There has been something said in connection with these roads, that they were hauling lumber at the lowest rates of any roads in the United States. Do you think that is true?

A. Yes, I think that is true, taking the total lumber business of the Northern Pacific Railroad, for instance.

Q. What I mean is this: Taking from certain lumber sections in the south, from what I suppose would be called the southwest, to lumber distributing centers such as St. Louis, Omaha, Kansas City and Chicago, on much shorter hauls than on the Northern Pacific, you say that your rates are lower per ton per mile than rates from such points as those?

A. I think they are generally. There are cases, as I remember, where the southern roads make some very low rates in order to reach distant markets and meet the competition of other sources of supply.

Q. Their haul is a much shorter haul on an average than the Northern Pacific's, is it not?

A. Yes.

Q. You say you think that coal and ore are carried at a lower rate per ton per mile than lumber, on your road?

A. No. I said I thought there might be indiivdual cases where they were carried at lower rates per ton mile than are charged on this Pacific coast lumber. In the aggregate, I think our coal business or our ore business pays very much more than this Pacific coast lumber.

Q. Do you recall anything else that you hauled over your road where you have made voluntary rates that are lower per ton per mile than on your lumber?

A. The most important item of that kind would be this Asiatic business, I suppose.

Q. I was eliminating the Asiatic business, because I understood that that did carry a very low rate?

A. I cannot think of any business important in volume that is carried at lower rates.

Q. Now, you heard yesterday the testimony of Mr. Munroe that on the Harriman roads they charged 5 mills per ton per mile as the cost of movement of company freight. I think I am correct in making that statement?

A. I did not understand him to say that it was the cost of movement necessarily. It was an arbitrary figure which

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they fixed as other companies have fixed it, as representing approximately the cost.

Q. Now, on your road what do you do?

A. I am not sure how we handle that.

Q. As a matter of fact, Mr. Woodworth, do either you or the Harriman system charge anything for handling company freight—charge yourself?

A. I think our company material is all billed free. I know that the purchasing agent, in making his estimates for the purpose of determining the point of delivery, figures our transportation at 5 mills. But that is used, as I understand it, simply for the purpose of determining whether it is better to take the delivery of a commodity, we will say at Portland, or buy it at St. Paul.

Q. Now, then, perhaps you remember when you were with the O. R. & N. Company. Do you remember whether company's material was handled free or not?

A. I do not.

Q. Now, if it is handled and a charge made at 5 mills, that would go into operating expenses, would it not?

A. Why, if that was the system, yes.

Q. If that was the system it would go into operating expenses. Then to that extent it would appear as an operating expense account, which would increase the amount of the operating expenses by whatever amount that 5 mills on the freight carried would figure up?

A. That would be true if they billed everything and charged it up in that way.

Q. That is what I mean. In handling this company freight in this 5 mills it is figured that way. Does that include all the small movement and the loading and unloading and handling of the freight by the company? Is that all included in the 5 mils, or is there a further charge made for that?

A. Why, if they used that arbitrary figure that would include everything. I am sure our road does not handle it that way. I do not think we make any account of the transportation of our material and supplies, because if they were charged against operating expenses they would have to be credited to something, and I know there is no such credit to our earnings.

Q. Mr. Woodworth, can you tell the court what particular service or charges go to make up the actual cost of movement?

A. Why, no, I could not state them, because while there are certain factors that are constant and must be recognized

in connection with the movement of every shipment, there are others that depend entirely upon the conditions.

Q. In your study of railroad operation have you never seen any tables prepared by experts and railroad men which purported to give the cost per ton per mile for handling freight?

A. Oh, yes, a great many of them.

Q. In all these tables have you ever seen any table that figured as high as 5 mills per ton per mile?

A. Why, yes.

Q. You have seen many of those?

A. I think so.

Q. Now, the various factors that enter into it are station service, train service, engine service, contingencies, maintenance of equipment of road and structures, and general expenses. That would make up the operating account, wouldn't it?

A. Well, it would depend entirely on whether you were estimating the cost of handling additional business or discussing the question as to what distribution should be made of all the expenses of the railroad, as between the different commodities and different movements of freight.

Q. How long have you been in the railroad business, in handling traffic?

A. I have been in the railroad business thirty years.

Q. Now, Mr. Woodworth, will you state what in your opinion, the cost—actual cost now—of handling traffic per ton per mile is?

A. No, I couldn't answer that question.

Q. Never have been able to determine in your thirty years of service, with any degree of satisfaction, so that you could even give an opinion that you would state was absolutely your opinion, as to the cost of handling traffic per ton per mile, on an average?

A. No, I wouldn't attempt any more in that connection than to estimate the cost of handing some particular item of additional traffic.

Q. Do you handle any traffic over your road at a loss, that you are aware of?

A. Yes, I think we do.

Q. For instance, what?

A. I don't think of any item just at this time. I have thought that this Asiatic business probably did not return the cost of service,—did not directly return the cost of service, and, as I said before, when this east-bound lumber busi-

ness got above a certain point, I have always been doubtful as to whether that returned the cost of service.

Q. Do you carry any rice over your road from Louisiana to coast points?

A. Yes.

Q. What rate do you make on rice, and what route does it take?

A. I don't remember the rate. It moves from New Orleans, and the rate was originally fixed by the Sunset Route to San Francisco.

Q. That is correct.

A. And we make the same rate from New Orleans to Portland and Seattle in connection with the general adjustment of rates, which makes San Francisco and those north coast points common.

Q. What in your judgment is the rate on that per ton per mile as compared with the lumber rate, less or more?

A. I don't remember the rate. Do you know?

Q. Yes. The rate is 55 cents.

Mr. Dillard: Which rate now, Mr. Teal?

Mr. Teal: He says it is over yours. I am going to give some figures over your road.

Mr. Dillard: I mean per ton per mile rate.

Mr. Teal: I say, this is the rate over yours, and he has given the same rate over his. He can figure it up.

Mr. Dillard: The mileage is different.

Mr. Teal: I understand.

The Witness: If the rate is 5 cents on rice from New Orleans to Portland and Seattle, why, obviously it represents the ton mile rate less than we earn on the lumber.

Q. Now from Lake Charles, Louisiana, by the Kansas City Southern, U. P. to Granger, the Oregon Short Line to Huntington, and then in on the O. R. & N., the rate is 3.70 mills per ton per mile, do you think they were losing money on that absolutely?

A. It would depend entirely on how their traffic would balance east and west bound, other conditions than—

Q. I am speaking now of the absolute cost per ton per mile. I am not speaking now of whether they are making money out of it; I am speaking now as to whether they would get back that cost on it.

A. Well, I think it would depend on these conditions that I refer to.

Q. Then, the conditions enter very largely even into the ton mile rate, don't they?

A. Into the service cost.

Q. Now, take on corn; you ship considerable corn from Omaha, Nebraska, and from Kansas City to Portland, Seattle, and those points, don't you?

A. Yes. The business is not large in volume. A few hundred cars a year.

Q. On those cars do you get absolute cost of service out of that?

A. Yes, I think we do.

Q. Now, then, how does that rate compare with lumber over your road on a per ton per mile basis?

A. As I remember it, the rate on corn is 50 cents from Kansas and Nebraska points, and the loading is usually very heavy. They load the cars to capacity.

Q. Then, as a matter of fact, the loading of a car and the carload earning is a much more important factor than the rate per ton per mile, isn't it?

A. Well, it is very important in estimating the cost of handling the business.

Q. Then, if there is a carrier of business that loads heavily, has but few terminal expenses, is not fast in movement, no particular risk attendant on it, it is loaded and unloaded by the shipper and by the consignee, and substantially all that the company pays on carload business is the haul at a very low rate, that business could be, under proper conditions, a profitable business, couldn't it?

A. As I say, those things enter very largely into the question of cost; and such business could be handled at smaller cost than other business which did not load heavily and require greater dispatch.

Q. Corn is a much more expensive commodity; that is, a carload of corn would be very much greater in value than a carload of lumber, wouldn't it?

A. No.

Q. A carload of corn wouldn't be?

A. I don't think so.

Q. How many cases to a carload of corn?

A. Oh, I thought you were talking about field corn.

Q. No, no; I am speaking of canned corn.

A. Oh, canned corn. I have given you the wrong rate, if you are talking about canned corn.

Q. I don't think you have, have you?

A. Yes.

Q. At any rate, you gave a corn rate. What corn rate were you giving?

A. I meant corn shipped from Kansas and Nebraska points, field corn, shelled corn.

Q. That is all loaded in box cars, isn't it?

A. Yes.

Q. You could not load that on flat cars?

A. No.

Q. And the rate per ton per mile on that is a very low rate, is it not?

A. About the same as the lumber rate.

Q. Now, you take coal from Duluth, Minnesota, or points of that character, to the Pacific coast points; how does that rate compare with the lumber rate?

A. There is practically no movement of coal from eastern terminals to Pacific coast terminals.

Q. Then, we will take from the middle west, like Sioux City, Iowa, and in through there. Is there no movement in there?

A. No coal movement.

Q. Why were the rates put in on carloads, then?

A. There have been a few carloads of anthracite coal shipped to the Pacific coast terminals. A very little of it is used, as you know, and that usually comes by water. For instance, when we used Baker heaters in our passenger cars, we used to buy our antharcite coal at Tacoma, from the Pacific Coast Company, and they brought it around in vessels from New York or some other loading point; and as I remember it, we have a rate on coal from Duluth to the Pacific coast terminals, but I don't remember that we ever carried any under it.

Q. Now, let us take cement. There is a rate on cement from Colorado and South Dakota, and Kansas City and Chicago to coast points, is there not?

A. Yes, sir.

Q. How did that rate compare with the lumber rate per ton per mile?

A. In the aggregate the cement pays very much more than the lumber. We have some rates to Pacific coast terminals,—rates made necessary on account of the competition of imported cement and cement from California,—which are very low; some of them lower than the lumber rate.

Q. You understand I am not criticising either the reasons, because the reasons are all good—the only purpose of this, to be entirely frank with you, is to have the record show the facts,—that is, that there are a number of commodities which are carried at a lower rate than the lumber rate, and much

lower than 5 mills per ton per mile. For instance, you have a 35 cent rate in from Denver by the Burlington to Billings and then over the Northern Pacific, 1884 miles. That rate is 35 cents. That equals a rate per ton per mile of 3.71. Would you say that you did not get back the actual cost of service out of that rate?

A. I think we do get back the cost of service, because that business takes the place of an empty car haul, the preponderance of our traffic being east-bound, and I think you will find all of these rates of the kind you describe are west-bound rates, and they represent our efforts from time to time to create business to make loading for these cars which would otherwise be hauled empty, west-bound.

Q. Now, you are familiar with the reasons given by Mr. Hannaford for the advance in lumber rates over the Northern Pacific, to the effect that it was on account of the empty car haul?

A. I don't remember just what he said, but that was one of the important reasons for it.

Q. In this letter of his he stated: "We believe with the proposed advance we can handle empties west at least up to our ability to handle loads east-bound on our line." Now, would the advance in rates, in your lumber rates, enable you to haul empty cars west for the purpose of handling lumber?

A. If all of the cars used for the lumber east-bound had to be hauled empty the whole distance west-bound, I should say no.

Q. Do you think there ever was a car hauled empty the entire distance of that road to haul lumber east?

A. Oh, a great many of them.

Q. Kirbyville, Texas, Beaumont, Texas, Center, Texas, and down through there, are producing lumber points, are they not?

A. I am not familiar with that country, but I have heard of them as lumber shipment points.

Q. And St. Louis, Missouri, is a distributing center for lumber, isn't it?

A. Yes, sir.

Q. The rates over the Lexington Junction and Wabash Railroad and other railroads to St. Louis, from that point, are 18 cents, and the highest millage per ton per mile is 3 mills from those four points and the lowest 2.7? Do you think those roads are getting back cost of service?

A. Why, that would depend entirely on the conditions under which they handle lumber. In a general way, I under-

stand those roads have a very large north-bound movement of empty cars, the cars having gone to Gulf ports loaded with grain; and if they can work that lumber north as against the south-bound grain traffic, I think they might get their money back.

Q. Do you think that is the case with the Illinois Central?

A. I have understood that was the case with the Illinois Central.

Q. Then, its traffic is not so evenly balanced?

A. I think the north-bound lumber movement on the Illinois Central takes the place of what would otherwise be an empty car movement, because they have a very large south-bound grain traffic.

Q. Lumber City, Georgia, Empire, Georgia, Bagsley and Brunswick, Georgia, are a lumber producing section down in Georgia?

A. Yes.

Q. And Cairo, Illinois, I understand, is also a distributing point for lumber?

A. It is more of a rate-basing point.

Q. Now, via the Chattanooga, Grand Junction and Illinois Central Railroad, at the time these tariffs in question were in effect, there were rates from the points I have mentioned over the roads I have mentioned, the highest being 3.97 mills per ton per mile and the lowest 3.31 mills per ton per mile. Do you think they got back cost of service?

A. From what I know of the conditions in connection with that haul I should say it was very doubtful.

Q. Now, without going into a large number of these illustrations, you would not want to be understood as saying, would you, Mr. Woodworth, that 5 mills fairly represents the actual cost of moving traffic over a properly constructed, property operated, modern railroad in this country?

A. You mean the whole business of a railroad?

Mr. Holden: Mr. Teal, you know Mr. Munroe very carefully pointed out to you that he was speaking about rates west of the Missouri river, and you were asking him about the Chesapeake and Ohio cost in regard to this 5-mill proposition.

Mr. Teal: I am not trying to—

Mr. Holden: No, but your questions to Mr. Woodworth talked about all railroads in the country. Now Mr. Munroe told you very carefully he was not dealing with the roads in

the country as a proposition, but only the roads west of the Missouri river.

Mr. Teal: Mr. Munroe didn't even state over his own road it was that, because I don't think he would.

Mr. Holden: No, I don't think he has put the subject at all in the light you have been putting it to Mr. Woodworth, but he did limit his expression—

Mr. Teal: The reason I want to be a little particular about this is, that this is going to a court, and I think a court has a right to rely upon these gentlemen who have spent the time they have on these matters; that if they have got the information which I think they possess, that we get it fixed as nearly definite as possible. Now, the question I am asking Mr. Woodworth is this: If, in his opinion, the cost of moving traffic over roads such as the Northern Pacific, the Union Pacific, the Great Northern (now I am speaking of actual cost) would average 5 mills per ton per mile.

A. The average cost of handling the whole traffic of any one of those road would doubtless be considerably more than 5 mills. Each one of them might have particular items of traffic which they could handle for a cost less than 5 mills. As I have said, it depends entirely upon what is the commodity and where it moves and under what conditions.

Mr. Dillard: He was speaking so low I did not catch his answer. Did he say the average cost would be more than 5 mills?

Mr. Teal: Yes, he said that.

The Witness: Of the total traffic.

Mr. Dillard: That is what I understood.

Q. Now you take the cost of moving freight, such as lumber, about which we are speaking now. Do you think that costs 5 mills per ton per mile to move? I mean as it is moved.

A. You mean this Pacific coast lumber?

Q. No, the lumber on your road—not any Pacific car.

A. Why, if I answer that question I want to answer it correctly, and I don't see how I can because I do not think anybody can tell how much it costs us to move the lumber on the railroad——I mean all of the lumber we move. They could take—

Q. Now, take your grain rates through Minnesota and Wisconsin into St. Paul or Duluth. Are they lower or higher than your average lumber rate?

A. On a ton mile basis they are higher.

Q. They are higher?

A. I think.

Q. Is the haul shorter or longer?

A. The average haul on grain is much shorter than the average haul on lumber.

Q. Now, as to the cost of handling grain or coal or ore: how does that compare with the cost of handling lumber over railroads?

A. Given the same length of haul, the cost of handling grain and ore would be less than the cost of handling lumber because it loads more per car, on the average.

Q. Then, it would be the return on the carload that would make it?

A. Yes; that is a very important item.

Q. Now, I am getting back to the question of cost. In this case Mr. Elliott testified that he thought the cost of handling grain, the cost of handling coal, the cost of handling ore or any of those heavy commodities is no higher than the cost of handling lumber. Now I am not speaking about what net return you could get out of it, but I am speaking of the actual cost of movement, of handling the stuff.

A. If anything, I think the cost of handling grain and ore per ton per mile for the same distance would be less than the cost of handling lumber because of the difference in the loading per car.

Q. Now, you are familiar with the lumber rates from Omaha to Chicago?

A. I don't remember what is the rate from Omaha to Chicago. Our business is all handled under through tariffs. I am familiar with the divisions.

Q. What is the division, then? That is the part I meant! Don't they get 10 cents?

A. The lines east of the Missouri river take the same revenue that is accepted by the lines south of St. Paul on Chicago business.

Q. How much is that?

A. 10 cents.

Q. Those roads are always glad to get that business, aren't they?

A. Well, it is a part of their general arrangement with the western lines, and after a rate is published, why, everybody gets after the business that is covered by the tariff.

Q. You are familiar of course with the fact that their

agents out west solicit this Pacific coast business on lumber?

A. Yes.

Q. The distance between Omaha and Chicago is about 500 miles, isn't it?

A. Approximately.

Q. That is a rate of about 4 mills per ton per mile, isn't it?

A. Yes.

Q. Are you familiar with the tonnage movement of lumber throughout the country as compared with other freights?

A. I can't say that I am.

Q. You don't know, then, what proportion of the total carriage of lumber to all the other freights carried? You never looked into that?

A. No. You mean on different railroads?

Q. Yes; just take the country as a whole.

A. No, I never made any examination of the figures.

Q. Do you know what the carrying of bituminous coal is compared to lumber?

A. No.

Q. Do you know anything about what the earning per car on coal is, as compared with the lumber?

A. I never had occasion to look up the figures.

Q. Would you say it was more or less per car?

A. On what roads?

Q. On any roads with which you are familiar.

A. I don't know.

Q. On your road the same minimums are in effect as are on the Harrison roads, are they not, on lumber?

A. Yes.

Q. That is, the general minimum. And these minimums have been increased, I mean during the past, or say within the past ten years?

A. The minimum weights are worked out on an entirely different plan now, and under that tariff some of them were really decreased, but the minimum weight now is according to the capacity of the car.

Q. Well, but as a matter of fact all the companies are building larger cars, aren't they, Mr. Woodworth?

A. Yes.

Q. And you would not want to leave it a matter of doubt, would you, that the earnings per car today are greater than they were five years ago?

A. That is true. And the cars are much heavier, too.

Q. That is true, but I am speaking of the earnings.
A. That is correct.
Q. You testified at Washington in this case?
A. Yes.
Q. You heard the testimony, yesterday, of Mr. Munroe as to how these rates were agreed upon? I am speaking now of the rates in the new tariff which is in controversy here.
A. Yes, sir.
Q. And his statement that it was a result of agreement and consultation between all the various western roads is correct, isn't it?
Mr. Holden: He said it was the result of conferences.
Mr. Teal: What is it?
Mr. Holden: Mr. Munroe said, if I may correct you, that the rates were the result of conferences.
Mr. Teal: What have I said now?
Mr. Holden: You said "agreements." We know what you are driving at, but you may as well drive straight.
Q. Well, the result of conferences between the various traffic departments of the roads.
A. Yes. I think I made a statement covering that when I was on the stand at Washington.
Q. And these conferences led to an agreement that they would be published, did they not?
A. They led to the publication of these tariffs.
Q. Who gave the instructions about publishing the tariffs?
A. Each road gave its own instructions.
Q. Was it agreed as a result of these conferences that these instructions would be given?
A. It was not agreed that they would be given. For instance, we decided that we were going to change our rates and advise the other roads to that effect, and they decided to change their rates. The change in the lumber rates was made just as changes are usually made in important rates of that kind.
Q. Are rates usually fixed over your roads—I am speaking now of the western roads—in the same manner that the lumber rates were fixed—the lumber rates in question here?
A. These through rates, like our transcontinental tariffs, are made in much the same manner. We meet and discuss the conditions; and whenever a tariff is re-issued, if questions come up between these general conferences about particular items, why, we go ahead and instruct Mr. Countess to change the tariff.

Q. Who is Mr. Countess?

A. He is our agent in Chicago—agent of all these roads for the purpose of publishing these tariffs.

Q. He is the joint agent of all the roads?

A. The joint agent.

Q. Now, I believe you testified that the general result of the operation of your road—I am speaking now of the returns—has been fairly remunerative for a number of years?

A. I think so.

By Mr. Walter:

Q. Do you know who first suggested this increase in lumber rates?

A. It would be hard to say, because it has been under discussion for all the years since the 40 cent rate was first made to St. Paul.

Q. At the time it was about to crystallize in the increase who was first active in the increase?

A. Why, I guess we were. We said as much about it as anybody.

Q. Was that because you felt that your total gross revenues or your total net earnings ought to show a greater amount?

A. No; so far as I am concerned it was because it seemed very plain that this increasing tonnage of lumber under the 40 cent rate was not paying the cost of service.

Q. It was not because you needed on the whole more money, but rather because the particular traffic did not bear its proportion of the returns to the company?

A. Well, that was as far as I went in my consideration of it.

Q. Do you know whether higher up in the organization of your company or the Greatern Northern—and by that I mean the president or an equivalent official—concluded they needed a little more money and where one went down raised the tariff on what could best stand it?

A. Oh, no, there was nothing of that kind. I might say this: That I have frequently heard the opinion expressed that many of our rates were likely to be reduced—I mean our higher rates—rates on merchandise and miscellaneous traffic and as those reductions came along it was very important that we increase any abnormally low rates we might be making.

Q. In other words, as it became necessary to reduce high rates, that you would take that reduction in revenue and

raise the rates on traffic that could stand it so as still to keep your total revenues on an even keel?

A. If the higher rates were reduced and we were unable to raise some of the low rates, of course our average return would be lessened.

Q. So that really it amounts to this, that in order to preserve your gross revenues, where rates are reduced, you try to find some traffic which is abnormally low and bring it up to what it should bear in the total return?

A. Well, that would be wise and proper, but this change did not proceed from any such reasoning or instruction on the part of the executive officers.

Q. No, but it was anticipating what might be done in the future; is that correct?

A. Well, as an incidental reason, yes.

Q. So that as a commission, either state or national, or voluntary action on your part, reduced the abnormally high rates, you would still be getting that reduction back off of other traffic that you had raised?

A. That might be so.

Q. In other words, any reduction that is made by the Commission on one traffic is gotten back by raising it on another?

A. No, sir, because unfortunately it does not follow that because some of our high rates are reduced we will be able to increase some of our low rates.

Q. That is what you would like to do?

A. That is what we would like to do.

Q. How much does 1000 feet of average lumber weigh?

A. All the way from 1800 to 4000 pounds.

Q. Would 3000 be an average, speaking in round figures?

A. It is difficult to state that because it depends upon whether it is rough or dressed.

Q. Yes; but averaging the dressed with the rough lumber, it will average about 3000 pounds?

A. All the lumber we carry from the coast east-bound?

Q. Into St. Paul.

A. Oh, as a guess I would say that the average of all the lumber we carry would be about 2700 pounds. That is nothing but a guess.

Q. The rate into St. Paul is now 45 cents?

A. Yes.

Q. That is about $12.15 a thousand feet?

A. Yes. I assume you have figured it there.

Q. And prior to the increase from 40 cents it would be $10.80?

A. Yes.

Q. So that you have added to the lumber $1.35. That has resulted in an increased price to the consumer, I take it?

A. No.

Q. You think not?

A. I am sure it has not.

Q. Who pays that freight? Who does pay that rate, Mr. Woodworth?

A. Inasmuch as the western shipper sells all of his lumber in this territory at delivered prices, and those delivered prices are according to the competition he encounters, it would follow that any increase we made in the freight rate must come out of him. And of course it finally goes beyond the manufacturer and to the man who owns the stumpage. It gets its final reflection in the cost of the logs.

Q. Now, you think that instead of adding the $1.35 on to the cost of the lumber at St. Paul, it would rather be subtracted from the amount they pay the owner of the standing timber?

A. It certainly would.

Q. Now, the rate to Chicago is 55 cents, isn't it?

A. Yes, sir.

Q. And that would amount to $14.85 on a thousand feet of lumber at Chicago?

A. Have you figured it?

Q. Yes.

A. Yes, sir.

Q. Now, to that you have added $1.35, by reason of the 5 cent advance the Commission allowed?

A. Yes.

Q. You did undertake to add 10 cents?

A. Yes.

Q. Which would make $2.70 a thousand?

A. Yes.

Q. Do you think if that full increase had gone into effect, of $2.70, that the consumer here in Chicago would not have paid any of that amount?

A. I don't think he would; because it would not change the price of lumber in Chicago, since lumber from other sources of supply fixes the selling price in Chicago. It would change the price of lumber at a point where the Pacific coast was the only source of supply.

Q. Now, in making the increase you took into considera-

tion the fact that the white pine district was practically depleted, didn't you?

A. We took into consideration the fact that the exhaustion of the white pine and the general increase in the price of lumber in this territory made it no longer necessary for us to make abnormally low rates to permit the Pacific coast manufacturer to sell his lumber in these markets.

Q. Now, when the white pine was depleted, the other lumber raised in price, didn't it?

A. Yes.

Q. That would be the effect of it?

A. Yes, sir. The tables show that there was an increase of nearly 100 per cent. in the course of ten years.

Q. Then as the white pine became depleted, the consumer paid more for his lumber, didn't he?

A. Yes.

Q. And on account of that depletion you added $1.35 or $2.70, as it would have been if the Commission had not cut the increase in two here in Chicago,—wouldn't that $2.70 be shown fully in the price to the consumer?

A. No, sir.

Q. You think the competition of white pine at 50 cents would be as efficient, and no less efficient than at 60 cents?

A. The competition of white pine and yellow pine from the south; because, at all times the Pacific coast manufacturer has made the delivered price which was necessary to sell his lumber; he has got the highest price he could.

Q. Now, then, if the white pine was being depleted, what about the yellow pine? You heard Mr. Munroe's testimony yesterday about that. Do you agree with him that Chicago is not now much of a market for yellow pine?

A. No, I don't agree with him; I think he is mistaken in that.

Q. So that is not one of the reasons,—

Mr. Dillard: Excuse me, Mr. Walter, I don't think he said that. He said that Chicago did not get much yellow pine, as he understood, from east of the Mississippi river, but he was not particularly familiar with the white pine situation; but from Mississippi and Georgia and Florida his understanding was that Chicago got its yellow pine from there.

Mr. Walter: I understood Mr. Munroe to say that as a result of the lessened amount of yellow pine which came to this market, and of white pine, that the traffic would bear a higher rate.

Q. Now, was that one of the assumptions that you had in fixing the rate in Chicago?

A. I don't remember that Mr. Munroe said just that, and in any event we did not recognize any such condition as that in changing these Pacific coast rates, because the contrary is true. The yellow pine shipments to markets like St. Louis and Chicago and this whole territory have been increasing rather than decreasing.

Q. Now, whatever might be the case as to Chicago,—at least as to St. Paul,—you did consider the factor of the white pine being removed?

A. Yes.

Q. In fixing the rate?

A. Yes.

Q. Now, whatever price is paid at Chicago to the lumbermen for a thousand feet of lumber, $14.85 of that is paid to the carrier, in effect?

A. Assuming the weight that you have used. Of course there are many kinds of lumber that do not weigh more than 2,000 pounds per thousand feet.

Q. Yes, but taking as an average 2700 pounds?

A. And the further you go east, why, the smaller would be the average weight per thousand, because the larger proportion of kiln dried or manufactured stuff would be shipped.

Q. A good deal of the rough green fir lumber that is used in Chicago comes from the Pacific coast?

A. No, very little rough green lumber is shipped from the Pacific coast to Chicago; in fact, practically none except long timbers.

Q. Does it reach St. Paul,—the Missouri river?

A. No green, common rough lumber comes even as far as St. Paul.

Q. Does any of the 4,000 pounds to the thousand feet reach Chicago or St. Paul?

A. No.

Q. The construction material, the long timbers weighs that, doesn't it?

A. Well, they weigh about 3300 pounds per thousand feet.

Q. And that would, of course, be greater than the 14.85 on the thousand?

A. Yes.

Q. You have a good deal of doubt in your own mind, haven't you, Mr. Woodworth, as to whether the lumber traffic does pay you nothing more than the cost of the service?

A. When our east-bound Pacific coast lumber business gets above a certain point, I am doubtful of it.

Q. Well, speaking generally of the situation as to your lumber traffic, you do have doubt as to whether that traffic pays you less than some profit over the cost of the service?

A. No; I am sure that our whole lumber traffic fully pays the cost of service.

Q. And something over?

A. Yes.

By the Master:

Q. Did I understand you to say that in promulgating this tariff in 1907 you calculated that the market was such that the consumer would stand the raise?

A. No.

Q. Did you calculate or intend that the producer should stand the raise?

A. As I tried to explain, it was our opinion that it would finally go through to the stump.

Q. You supposed, then, that the producer would have to stand this raise in rates?

A. Or the owner of the timber.

Q. Now, when a declining market sets in, who feels that first—the producer or the carrier?

A. Why, if the shipments continue by reason of the manufacturer reducing his prices, of course we don't feel it and he does.

Q. Now, what is the usual experience, if you know?

A. Why, I should say that the burden is usually divided.

By Mr. Walter:

Q. Now, then, what did happen in 1907 when this terriffic crisis came in the lumberman's affairs? Did the railroads share with him any of the ill effects, by reducing their rates?

A. We made no reduction in our rates.

Q. And that increase was coincident with the crisis. I believe that is what Mr. Munroe testified.

A. Yes, the decrease in the lumber business was first apparent along about May or June, and the situation became acute at the time of the panic in October or November.

Q. When was the notice of the increase published?

A. Why, the formal notice that was published—

Mr. Teal: No, the notice. When was it first given out to the public? Wasn't it early in the spring of 1907?

The Witness: Oh, there was a newspaper rumor as early as May.

Q. Well, it was something more than a rumor; it happened to have a substantial basis?

A. No, because we hadn't prepared the tariffs at that time.

Q. You had decided on the increase in rates?

A. Yes, in a general way.

Q. So that that was the first notice to the lumbermen as to the increased rates?

A. We made no announcement of the change, and gave no confirmation of any of those rates until much later.

Q. When was it first given to the public authoritatively,—substantially authoritatively,—that those rates were to be increased?

A. I think it was, as I remember, early in July.

Q. Do you agree with Mr. Munroe that the market was then top heavy, that the prices of all were such as to lead to reasonable business prudence, giving you the opinion that there must be a decline?

A. That was the general opinion. I know that a good many building operations were postponed, because the interested people said they thought prices of material were too high; a man would be foolish to load himself with a fixed charge based upon the then existing high prices and be obliged later to compete with a man who had built a warehouse, or other structure, at the less cost.

Q. And it was with that knowledge that these rates were increased?

A. That had nothing to do with the increase.

Q. No, but you had that knowledge at that time?

A. Why, yes.

By Mr. Wimbish:

Q. Mr. Woodworth, you have testified that the white pine supply of timber has become greatly depleted. You are doubtless also familiar with the fact that the yellow pine cut will be limited to a short period of years, say ten or fifteen or twenty; so that the only source of supply of any magnitude remaining in this country is in the Pacific coast northwest. Now, those facts are pretty well known to the people at large and to the holders of timber in the Pacific coast northwest territory. Now, if that is true, is it not to be expected that the value of that stumpage will necessarily increase?

A. I think there are some owners of stumpage in Oregon and Washington who would not follow down a declining price for the reason you state.

Q. Well, I ask if it is not to be expected? Does not every

thinking man know that the value of that stumpage must necessarily increase as these other sources of supply become depleted, and competition to that extent loosens?

A. I think that is so. But there is always a sufficient number of owners who, for one reason or another, are willing to sell or cut their timber to meet the demand, on the basis of whatever may be the market price. That is, we think so.

Q. Is it not true that the owners of this stumpage in Washington and Oregon, as a rule, are men who are able to hold their timber? Is it not owned largely by men of wealth and by corporations able to tide over a period of depression in prices?

A. Very many of them are, but of course there is a large holding by individuals who are not so strong.

Q. Then, if this tax represented by this advance is borne by the stumpage owner, then you force him,—I say "you," I mean the conditions for same,—to sell his stumpage for less than its real, true value?

A. Well, not less than its present value.

Q. And if he cannot or will not, bear the reduction in price brought about by the increase of rate, then the manufacturer, or dealer, must bear it, must he not? You have testified the consumer would not have to bear it, because of competitive conditions?

A. Why, certainly if the man who owned the timber and sold the logs would not change his price, why, the manufacturer would have to bear it.

Q. Do you not know, as a matter of fact, that the price of stumpage has not decreased in Washington and in Oregon? I am speaking now of the rule, as an average.

A. No; I understand it had held about the same, except in individual cases.

Q. Therefore you have really levied this advance, which I will call a tax (not offensively) upon the manufacturer? That has been the result of it?

A. Of course the manufacturers out there to a very great extent own their own timber.

Q. That will not change the question, however, because stumpage value is the same, whether owned by one man or another.

A. Why, of course, one or the other must absorb the increase in the freight rates; there is no question about that.

Q. Then, this increase was a direct sharing in what you supposed to be the prosperity of the lumber manufacturer.

A. I have never thought of it in that way. It always seemed to me that we were in the position of having assisted the western manufacturer to make the necessary delivered price down here when he had gone as far as he could and could not reach these markets unless he did have a lower rate. Now, those conditions changed. Increase in price of timber down here was anywhere from 50 to 100 per cent. higher than when we made the rate. Therefore, we say to him, "You no longer need the assistance of an abnormally low rate, and ought to let us get a little more for our service."

Q. Now, that increase in price was due to the lessening of competition?

A. Yes.

Q. And therefore to the increase in the stumpage value, was it not, Mr. Woodworth?

A. In the other districts?

Q. Yes.

A. Yes.

Q. In other words, he could get a larger price for his delivered product in Chicago, because the value of the stumpage had gone up in all districts that shipped into Chicago?

A. That is correct.

Q. You sometimes voluntarily reduce rates, do you not?

A. Yes.

Q. What considerations induce you to reduce a rate in the absence of competition? I understand if a lower rate is made to a competitive market, why, you have to lower your rate. Now, in the absence of competitive conditions, what induced you to lower a rate?

A. To create or stimulate business.

Q. Then, as long as traffic will move freely under a rate, you do not voluntarily reduce that rate?

A. No.

Q. So that if the traffic will bear it you regard it as rea sonably low?

A. If the rate is reasonable in itself.

Q. What do you mean by reasonable in itself, Mr. Woodworth?

A. Well, of course, there are many measures of that.

Q. Can you give me one standard by which the reasonableness of a rate in and of itself can be tested?

A. No, I cannot,—no rule or standard that would apply to all rates.

Q. What is your standard? How do you test the reasonableness of a rate?

A. Why, I cannot test it until I know the commodity to be moved, the points between which it will move, and the time and volume in which it will move.

Q. A rate may be reasonable, relatively and comparatively, but is there any such thing as a rate that is reasonable in and of itself, in other words, if you are given free rein to make rates over the Northern Pacific, in the entire absence of competitive conditions, both market competition and carrier competition, could you make rates on a particular commodity and say that those rates are just and reasonable in and of themselves?

A. I think a man can come pretty near to it.

Q. Well, what would be the standard, then?

A. Well, it would be necessary for him to fix the rates on each commodity and between all of the different points, with respect to these conditions. But when he got through he ought to be able to say that he had worked out a system of just and reasonable rates, if, as you say, he had a free hand. But it would, of course, be a matter of judgment.

Q. So that there is no test that you know of,—no standard? It is a relative proposition always?

A. There can be no general rule.

Q. Now, in making a rate on a particular commodity, do you consider the value and character of the commodity?

A. To some extent. I don't think it is a very important factor, though.

Q. Do you consider the weight as compared with the bulk?

A. Yes; that is much more important.

Q. Do you consider the length of the haul?

A. Yes.

Q. The volume of the traffic?

A. Yes.

Q. The risk in transit, the risk of loss or damage?

A. Yes. That is not so important as the other items.

Q. The terminal cost of handling, loading and unloading?

A. Yes.

Q. Matters of that kind. Then, of course, you consider competitive conditions?

A. Yes, sir.

Q. Is there anything else that you consider in the making of a rate? Do you consider the prosperity of the shipper or the industry?

A. Just as you said a few moments ago. We aim to fix the rates on a basis which will permit a free movement.

Q. Your rates do not vary according to fluctuations in the price of the commodity? You sometimes make advances because you think the industry is prosperous, as you did in this case; but you make no effort to adjust your rates to the rise and fall of the market on commodities, do you?

A. Yes, rates are very frequently reduced, for the reasons you suggest. They spoke yesterday of the 45-cent rate that was made from Portland down into Kansas and Nebraska in 1893. That was made because at that time it did not appear that they could afford to pay any more; could not sell any lumber on any higher rate.

Q. But that wasn't exactly my question. I asked you if you made any attempt to adjust your rates to the rise and fall of the market. Now, let us take wheat. Take years when wheat is low. Do you reduce your rate because of the reduction in the price of wheat?

A. I think I understand your question now, and I would say, no, we don't try to follow the fluctuations of the market with our rates.

Q. And the mere fact that wheat may have gone up in price does not induce you, in and of itself, to increase the freight rate on the wheat, does it?

A. No.

Q. Then why do you apply that proposition to lumber?

A. We have no grain rates which we do not regard as normal rates. If we had previously made abnormally low rates in grain, because the farmers were poor and the price was low, why, then, when the price went up and they became able to pay a normal rate, we would increase the grain rate.

By Mr. Teal:

Q. There are just one or two questions that I want to ask, which are brought out by those that I did not understand before. Do you consider, Mr. Woodworth, that a freight rate to transport manufactured goods is a cost of manufacture that ought to be paid by the consumer, or is it a cost which should be paid by the producer as an element of the cost of the product he makes?

A. I think that depends entirely upon the market in which it is sold. If the market is exclusive to a given source of supply, why, generally speaking, any change in the freight rate is reflected in the price to the consumer.

Q. That is not the question I asked. I asked this question: Whether, as a matter of economics,—as a matter of business,—a freight rate that is paid is a part of the cost

to be borne by the consumer on that product, or is it a charge against the manufacturer?

A. Well, I say again that it depends entirely upon the conditions.

Q. You think, then, that there is no principle of economics that fixes that at all?

A. I don't see how there could be any rule.

Q. Would you call the tax that is levied by the State of Washington against these mills a part of the cost of manufacture?

A. Yes, I think that would be true.

Q. And would you call the wages of the men around the mill, who haul the lumber to the railroad, a part of the cost of manufacture?

A. Yes, sir.

Q. But you don't call the tax that is levied by the carriers a cost of manufacture at all, in this instance?

A. It depends on whether the manufacturer pays it, or his customer.

Q. And fixing this rate,—this advance,—what you had in mind was that the cost would come out either of the manufacturer of the lumber or the owner of the stumpage, is that correct?

A. I think under the conditions that exist in these eastern markets, that would be true.

Q. No, I am speaking about the basis of it.

A. What do you mean by "the basis"?

Mr. Teal: Just read the question.

(Former question read.)

Q. I would like to have an answer to that question, and then explain it. If that was the case, it is very simply answered.

A. The change in rate did not turn on the question as to whether the increase would be borne by one party or another concerned in the transaction.

Q. That I understand; but in figuring on this advance, you have stated that the cost must come out of one or the other,—either the manufacturer or the owner of the stumpage. Now, I ask you whether that was what you considered in making this advance?

A. I expressed the opinion that it would work out that way.

Q. But what did you consider in arriving at the conclusion about the advance? That it would do that?

A. Why, incidentally, I think, we assumed that it would

work out that way; but our action did not depend upon that result.

Q. I understand. It was a matter of indifference where it came from, but when you speak of "we," of course you are speaking of the traffic men. You did assume that it would come out of either the stumpage or out of the manufacturer?

A. It had to come out of somebody.

Q. Oh, that is true.

A. And it seemed probable that the burden would fall upon one or the other of the two parties named.

Q. You mean by one or the other, either the stumpage or the manufacturer?

A. Yes, sir.

Q. Now, then, you think that is a proper basis upon which rates can be made?

A. Why, it is not a basis for rates at all.

Q. Do you think that is an element to consider?

A. It is an incidental effect of a change in rates.

Q. And if the incidental effect is to place the tax for the movement of a commodity upon the purchaser of that commodity, then you feel that that is a perfectly legitimate advance, for that reason?

A. Why, if the rate that we make is a legitimate rate.

Q. Even if it is a legitimate rate, do you think you can do that?

A. Why, yes; we are entitled to a legitimate rate.

Q. Then, if the profits of the manufacturer get again higher than you think they ought to be, do you think that you would have a right to make still further rates?

A. If our rate was yet abnormally low, yes.

Q. And do you think that you would have a right to increase this tax for carrying, until the manufacturer could not manufacture?

A. No, not at all; but as he became able to pay we would have a right to increase his rate until he reached a normal basis.

Q. Now, on the advance that was put in by the northern lines, and that the Commission allowed in part, would that pay a fair return on the carriage of lumber?

A. Up to the point where it did not involve an empty westbound haul of the cars, I should say yes.

Q. But I am speaking now as it existed—the condition that you are trying to meet. What I mean is, under the conditions as they existed, and what you were trying to meet, would

the rates that you established, in your judgment, have produced reasonable remunerations?

A. You mean the November 1, 1907, rates?

Q. Yes, the rates that you established?

A. With the present relation of east and west-bound tonnage, I should say yes.

Q. I was speaking of the way it stood?

A. Yes.

By Mr. Holden:

Q. Mr. Woodworth, I want to direct your attention to the language of the opinion of the Commission in one of these lumber cases No. 1327, Oregon and Washington Lumber Manufacturers Association against the Union Pacific Railway Company et al., in connection with the questions that were asked you regarding where the probable effect of this advance in rates would ultimately fall. On page 5 of that opinion is found this language: "After the announcement was made that the lumber rates were to be advanced, the price of logs fell off a dollar per thousand feet in the month of July, 1907. The next month the price dropped a dollar and a half; with a corresponding fall in the following month; making the total decrease from August to December $4 per thousand feet." That, as I understand, means that the price of logs to the manufacturer of lumber, between August and December, 1907, fell off $4 a thousand feet in the market on the Pacific coast. That is more of a decrease in the price of logs than the lumber advance advanced the cost of transportation to the manufacturer, is it not?

A. Very much more.

Q. The advance in the rate which the carriers asked, to St. Paul, was a 25 per cent. advance, and the advance in the rate asked to the Missouri river was 12½ per cent.?

A. Ten per cent.

Q. Well, it was an advance from 50 to 55 cents on the Missouri river?

A. Yes, sir. That would be 10 per cent.

Q. Well, 10 per cent. My arithmetic is a little lame. It has been said, and is frequently seen in the record in this case before the Commission, that the advance in the rate to St. Paul amounted to about $2.75 a thousand feet. I think that is the proper way to express it. This decrease in the cost of logs was $4 a thousand feet. So your statement seems to be borne out by the fact as found in this opinion, that the cost to the manufacturer of getting his logs to manufacture

into lumber, decreased much more than the added burden of the advanced rate in transporting lumber, is it not?

A. Yes, sir.

Q. Now, there is an exhibit offered by the complainants in this case, which was offered in connection with the testimony of Mr. Buehner, and it is entitled "Buehner Exhibit No. 1," and is found opposite page 102 in the brief filed for the complainants in 1327, by Messrs. Teal and Miner. It consists of a chart showing the relative price of yellow fir logs and the selling price of common lumber, in the years 1900 to 1907, inclusive. Directing your attention to that exhibit, does that not also show the same decrease, approximately speaking, in the price of logs that the Commissioner referred to in writing the opinion?

A. Yes; it shows that the price of logs went down with the price of lumber.

Q. And went down much more than the added cost in the transportation of the manufactured lumber, resulting from the rate asked by the carriers?

A. Yes.

Q. Is it not a fact, as shown by the record in this case, that over a period of three or four years, approximately stating it, the price of logs in the western market advanced even more than the $4 decrease referred to in this opinion, and was that not the subject of great complaint by the Pacific coast lumber manufacturers, in their journals and in their public utterances, which are shown by exhibits in this case, that the log prices were advancing beyond all reason?

A. Yes, sir; such statements were made.

Q. And are shown by exhibits in the record. I am asking these questions to connect up this testimony with the record in the case, and we will illustrate and argue that matter more fully to the master when the time comes to present our views on this phase of the record. You were asked about the 10 cent division accepted by carriers east of the Missouri river in transporting lumber or sharing in the transportation of lumber from coast points to Chicago. So that that may be clear, I wish you would state just how that comes about, or, if I may shorten the matter a little, I will ask you if my statement of the matter is not accurate. Lumber arrives in Chicago from the coast points via two main routes—one via St. Paul and the other via Omaha. That is true, is it not?

A. Yes, sir.

Q. It has already been testified here, and I think it is

a fact, that the division in the rate from St. Paul to Chicago is 10 cents, that is true?

A. Yes.

Q. And that that division results from the competition of lake vessels from Duluth and points near the head of the lakes to Chicago. Is that true?

A. Yes, sir.

Q. What is the rate on lumber to Duluth, as compared with the rate to St. Paul?

A. The same.

Q. Is there not that relation, generally speaking, in rates to Duluth and to St. Paul and Minneapolis?

A. Yes, sir.

Q. That is a fixed relation, is it not, and has been so for many years?

A. As to western rates, yes.

Q. So, with that relation in mind, the lumber may move to Duluth, and then by water to Chicago, at the low rates which are made by lumber schooners, and the carriers, in order to move lumber via St. Paul and via rail to Chicago, cannot obtain any higher rate than obtains through Duluth and the lumber transportation by water to Chicago, is that true?

A. Yes, sir.

Q. Now, in order to permit the movement of lumber through the Omaha gateway, and the use of the lines leading from the west to the Omaha gateway, and thereby open up more lines of transportation for the movement of lumber from the coast to Chicago, is it possible for the railroads leading from Omaha to obtain any different rate basis than this same 10 cent division that applies and is caused by the lake rates?

A. The through rate to Chicago would be based on the rate to St. Paul plus the 10 cent rate St. Paul to Chicago. That would fix the through rate via Omaha. Again, the question of the division of the rate is a matter of agreement. The lines east of the Missouri river formerly got 12 cents in the division of that rate, but, of course, the western lines have always taken the position that they ought to accept east of Omaha as low a rate as was accepted from St. Paul, and have done everything they could to force the lines east of Omaha to accept that rate, and finally succeeded.

Q. And is it an accurate statement to say that the 10 cent division between Omaha and Chicago, on this lumber traffic, is a direct reflection of the St. Paul and Duluth situation that I have referred to?

A. Yes, that was the argument we used with the lines east of the Missouri river.

Q. And that was the argument which they accepted, and has been the basis for a considerable period of time?

A. Yes, sir.

Q. Some questions were asked you in reference to the Illinois Central Railroad, and you stated that there were a great many empty cars made in the southern part of that system, which came north loaded with lumber. What has been the current of the grain movement to gulf ports over a line of that kind in recent years?

A. An increasing proportion of the grain produced in the Middle Western states has been going to gulf ports as against the Atlantic seaboard. It formerly went very largely to Atlantic seaboard points.

Mr. Wimbish: While I don't like to object to any testimony, yet I don't think the witness is personally familiar with tonnage on the Illinois Central, and there is very much better evidence in the reports of the company itself.

Mr. Holden: Well, I don't offer him as a witness on any specific fact; but I think it is a matter of general traffic knowledge that the increase in movement of grain to the gulf ports has been going on, just as he states. I think we all know the fact.

Mr. Wimbish: And we also know, Mr. Holden, there has been a very great increase in imports coming from New Orleans north to Chicago.

Mr. Holden: Yes.

Mr. Wimbish: All of those facts can be gotten from the report, and they cannot be gotten from a witness of this kind.

Mr. Dillard: Well, a report is secondary evidence.

Mr. Teal: Well, call your witness. You have witnesses.

Mr. Holden: I think probably you opened the subject on this examination.

Mr. Teal: No, if I remember rightly in your opening statement you spoke of how evenly balanced the Illinois Central was.

Mr. Holden: We will probably cover that before we get through, but I say in the examination of this witness you opened that subject.

Mr. Teal: I don't care anything about the rates. Mr. Woodworth don't generally testify to what he don't know, so you can ask what you want. I don't care.

The Master: Just note the objection, and we will hear the testimony.

Mr. Holden: All I am seeking to show is the fact, as I understand it to be, that in recent years the movement of grain has very largely increased from the middle western grain producing sections of the gulf ports.

Mr. Teal: Pardon me, Mr. Holden. Wouldn't it be better instead of telling the witness what you want him to say, to ask the question whether he knows it, and not state what you already know.

Mr. Holden: He has already stated it.

Mr. Teal: Then the discussion is ended.

Mr. Holden: The objection came after he made the statement. We are using up a good deal of language here which means nothing, perhaps, in the way of objection.

The Master: Well, it is in the record.

Mr. Wimbish: There is another idea I want to suggest now on that line, to show why this character of testimony ought not to come in in this form. We may be called upon to show that in the Tift case the officials of the Illinois Central and the other southern lines made the same contention there that they have made here, that the empty car movement was south. Now, I don't want to go all over that stuff.

Mr. Holden: Well, that was four or five or six years ago, when that hearing was held, and my questions related to a time after that hearing.

Q. You were asked a question or two about rice rates from Louisiana points to the Pacific coast. Are there any competitive features in connection with a rate of that kind to the coast points?

A. Yes. The southern rice meets the competition of rice from China and Japan in the Pacific coast markets.

Q. That rice from Asiatic points comes, of course, to the Pacific terminals in various forms of water transportation, and at widely varying rates, does it not?

A Yes, sir.

Q. Is it your understanding that that competition, then, has a controlling bearing on the rate on Louisiana rice to Pacific coast harbor points and that vicinity?

A. Yes, because it limits the price at which the rice from Louisiana, for instance, can be sold in those markets.

Q. And therefore limits the volume of the rate that can be obtained and permit of any movement of southern rice in competition with Chinese or Japanese rice?

A. Yes, sir.

Q. Have you in mind any rice rates to Montana points from Louisiana?

A. No, but the rate would be over one dollar.

Q. Directing your attention to a very late decision by the Interstate Commerce Commission, which came out this week, in a case in which the Northern Pacific Company and the C., B. & Q companies were parties,—I don't know whether you have seen it or not, but I ask you if you have,—in which the rate of $1.05 to Billings, Montana, was approved and established on rice from Louisiana, in a complaint brought by the Stone-Ordean-Wells Company?

A. I knew of the complaint. I have not seen the decision.

Q. Well, such a rate as that would be largely freer from the close competitive conditions you have referred to, to coast points, would it not?

A. Yes. There is no reason why the rate to Montana should not be a normal rate.

Q. Something was said about cement rates to the coast. Are there any competitive conditions regarding the movement of that traffic from the interior country to coast ports?

A. Yes. I stated that these low rates were necessary to meet the competition of cement imported from Europe and cement produced in California and other Pacific coast points.

Q. Cement may move by ocean vessels, steam and sailing at very low rates, may it not?

A. Yes.

Q. Coal, as you have already testified,—

Mr. Dillard: Wait there a moment.

By Mr. Dillard:

Q. It is a fact, too, isn't it, Mr. Woodworth, that cement will load better than most things into refrigerator cars, and furnishes loading for the refrigerator cars which need to go out into that coast country to bring the citrus fruits east?

A. Yes; it is very desirable trade for either a railroad or a ship.

Q. It is also true, is it not, of cement, that it is a product of such exceeding low price that it will not move any distance at all except on a very low freight rate?

A. Yes, sir.

Q. In the sale of cement, isn't it true that always and of necessity the freight rate is the biggest item that enters into it?

A. If it moves any distance, yes.

Q. Any distance at all?

(No response.)

Mr. Wimbish: Isn't that true of lumber, also?

The Witness: Not so true of lumber; it is true of coal.

Mr. Wimbish: Isn't the price of lumber to Chicago,—I mean the rate to Chicago,—equal to the value of the lumber at mill in Washington?

Mr. Teal: Average that.

The Witness: Not now, it was formerly.

Mr. Walter: Is it more now?

The Witness: The original price will average greater now, I think.

Mr. Walter: Than the freight rate?

The Witness: Yes. The time was when the freight rate was greater than the f. o. b. price of the lumber.

By Mr. Holden:

Q. There is a great deal of coal mined and produced in the western country, is there not, from various mines?

Mr. Teal: Where do you mean? The Northwest is so big.

Mr. Holden: Well, it is big. Mines west of the Rocky Mountains.

Mr. Teal: In what states?

Mr. Holden: The Northwestern states, Idaho, Montana, Washington and Oregon. Are there any coal supplies up in that country?

The Witness: In Montana and Washington, yes; none in Oregon of any consequence.

Mr. Dillard: Large mines in Wyoming, are there not?

The Witness: Yes, sir.

By Mr. Holden:

Q. Now, these west-bound rates on such commodities as were referred to, including cement and rice and coal—do you consider that they offer any fair basis of comparison to your east-bound lumber rate?

A. No.

Q. The record already covers pretty well the proposition; but in recent years the movement of empty cars on the Northern Pacific and Great Northern roads has been largely west-bound, has it not?

A. Yes, sir.

Q. And those cars, if loading is not secured for them of one kind or another, move west empty, long distances?

A. Yes, sir.

Q. And was that one of the reasons you had in mind that would justify a road in taking such freight as rice and cement at the kind of rates that you have referred to, in order to avoid hauling the cars empty?

A. I think I stated that those rates represented our efforts to create business and make loading for these cars, which would otherwise go west empty.

Q. And under those conditions, any rate that would represent the difference between the cost of hauling an empty car and hauling a loaded car would, to that exent, and under those circumstances, be justifiable?

A. I think so.

Q. And that was the condition of affairs in 1893 when the movement of empty cars was all east-bound, which led to the putting in of this lumber rate at that time, on a 40 cent basis to St. Paul?

A. Yes.

Q. Reference was made to reductions in other rates that were on a higher basis than these lumber rates. Have there been reductions in rates in recent years that you can refer to?

A. Yes. There have been many important reductions in rates. Our rates have been largely reduced in Minnesota and Dakota. We have had some considerable reductions in Montana, under the authority of the State Commission; and if we should accept the decision of the Spokane case, there would be a wholesale reduction of our rates in both directions, and between all points, all the way from St. Paul to the coast.

Q. St. Paul to where?

A. All the way from St. Paul to the coast.

Q. Now, speaking of the Minnesota reductions: the state authorities there reduced all of the class rates, did they not?

A. Yes.

Q. Two or three years ago?

A. Yes, sir.

Q. They reduced a large number of your important commodity rates, did they not?

A. Yes, sir.

Mr. Teal: Pardon me. Are you operating under the reduction there of the commodity rates?

Mr. Holden: We are on the merchandise rates.

The Witness: Under the class rates, yes.

Mr. Teal: No, under the commodity rates you were just asked about.

The Witness: We are not, under the ones last ordered.

Q. No, not under the last. But prior to the reduction ordered in the commodity rates, which the carriers enjoined and are now litigating, there were voluntary reductions in

these same commodities of a considerable percentage, were there not?

A. Yes. That was especially true of the granaries and coal rates.

Q. And the reductions in the merchandise rates, which were put into effect, brought about corresponding reductions in interstate merchandise rates from eastern terminals out into North Dakota, did they not?

A. Well, not the corresponding reductions, but they did cause reductions of rates.

Q. I did not mean corresponding in the same percentage, but they affected your interstate merchandise rates from eastern terminals out into North Dakota, and, to some extent, even to Montana?

A. Yes.

Q. And caused certain necessary reductions in these interstate rates resulting from the action of the state authorities in the State of Minnesota in reducing the state rates?

A. Yes, sir.

Mr. Walter: Was that done to give color to the contention that the reduction of interstate rates necessarily compels reduction of state rates?

The Witness: Of course not. We don't reduce any rate that we are not obliged to reduce, if we think the original rate was a proper one.

Q. Those interstate reductions were made out of deference to the third section of the Interstate Commerce Law, in part, at least, to avoid reductions west-bound in North Dakota, as compared to the reductions forced by the State of Minnesota authorities, were they not?

A. Yes; and the Interstate Commerce Commission has frequently held that rates which exceed the combination of locals are prima facie unreasonable, and had we not changed the rates to Dakota points they would have been higher than the combination of locals on Moorhead.

Q. So that is the color which Mr. Walter referred to, bearing upon, or throwing light upon these interstate reductions? By Mr. Walter:

Q. In all instances, did you reduce the through rate to the sum of the locals?

A. Yes.

Q. Where the local had been made by the state authorities?

A. Yes.

Q. If the local rate was just and reasonable, the interstate

rate, of course, could not be more than the sum of the locals and be reasonable?

A. That was the view taken of it.

Q. Well, that is true, isn't it, Mr. Woodworth?

A. Yes. And whether the state rate was reasonable or not, it was there, and a man could re-ship and accomplish the through rate which we made. We thought it better to make it in the tariff.

Q. He would have to have an agent there to receive the traffic and re-bill it, wouldn't he, at the intermediate point?

A. Oh, we could undoubtedly cause him much inconvenience, but it exposes us to much criticism if we attempt to charge more than the combination of rates.

By Mr. Holden:

Q. The passenger rate in Minnesota was reduced from 3 cents a mile to 2 cents, was it not?

A. Yes, sir.

Q. And that went into effect several years ago?

A. Yes, sir.

Q. Did that reduction in the state passenger rate affect your interstate passenger rates by reduction in those?

A. It changed all of our through rates as far west as Seattle.

By Mr. Teal:

Q. Mr. Woodworth, I just want to ask you one or two questions in view of this hard luck story. I want to ask you if Mr. Elliott, the president of your road, did not issue a circular in 1906, calling the attention of the public to the tremendous expansion of the business of the Northern Pacific Railway Company?

A. Yes.

Q. I will ask you if it is not a fact that your gross revenue has increased over 140 or 150 per cent. in the last eight years upon the Northern Pacific Railroad?

Mr. Holden: Mr. Teal, all that is a mere matter of statistics.

Mr. Teal: Yes, I understand so. There was a good deal of matter you were asking about, but I will get through in just a minute.

Q. It is a fact, isn't it, Mr. Woodworth?

A. I don't know the figures, but I think that may be true.

Q. Well, it has increased very largely both in gross and in net?

A. It has in gross. I am not familiar with the net figures.

Q. You are not familiar with the net returns to the Northern Pacific Railroad?

A. I have not in my mind the net earnings from year to year, in fluctuations.

Q. Has the traffic density increased?

A. Yes, sir—

Q. The number of tons carried increased?

A. —that is, it has increased up to a year ago.

Q. Well, I was speaking of during the time that this case is being confined to. Have your ton mile rates advanced very largely during this period?

A. No.

Q. Do you know whether they have not increased some?

A. There was a slight increase this last year.

Q. That is, in the rate per ton per mile?

A. Yes; due to the increased proportion of short haul business and merchandise business.

Q. Do you know anything about a dividend of 629 per cent. that was declared in November on the Northwestern Investment Company's stock?

A. No, except what I have read about it in the newspapers.

Q. Well, you know that that resulted in an extra dividend on the Northern Pacific stock, amounting to over $17,000,000, don't you?

A. I think they paid an extra dividend of eleven and a fraction per cent.

Q. On fifty-five millions of stock?

A. Yes.

Q. You do not wish to be understood as saying that a road with the earnings of the Northern Pacific railroad for the last ten years has not been getting out of its rates, and from its revenue of all kinds, a fair return on the investment, do you?

A. I have not said that. This money that you speak of as having been paid out in dividends did not come out of our earnings.

Q. No, but it came out of one of the subsidiary companies.

A. A company engaged in coal and real estate business.

Q. One of the same companies, the value of the lands of which in the Spokane case was used as an estimate to fix the basis of road making, wasn't it?

A. I don't think it was, but I won't speak positively about that.

Q. That wasn't considered in the valuation of the engineers in that case?

A. I don't think so.

Q. To the extent of $50,000,000?

A. I don't think so.

Q. You wouldn't be sure about that?

A. I won't be sure about it.

Q. Now, you were speaking about this decline in logs in the latter part of the year of 1907: did lumber go down with them?

Q. Went down the full amount, too, and more, didn't it?

A. I think so.

Q. Now, this Chicago rate, between Omaha and Chicago, of 10 cents a hundred,—you did not understand me to say either in reference to that or in reference to any of these other rates that I was asking you about, that they were unreasonably high, or that I was criticising them for being made, or being unreasonably low, did you?

A. No, I don't so understand it.

Q. It was simply a matter of fact that a certain rate was charged, that is correct, isn't it? That is all I was asking you about?

A. That is as I understand you.

Q. And you also stated, did you not, Mr. Woodworth, that the roads east of Omaha, throughout the west, to your knowledge, solicited this lumber business on this basis of 10 cents a hundred?

A. Yes.

By Mr. Dillard:

Q. Did you ever know a rate to get so low that an agent would not solicit for it?

A. No. As I stated, once the tariffs are published, why, they are expected to go out and hunt the business covered by that tariff.

By Mr. Teal:

Q. That is what I wanted to know. You fixed the rates,—I mean the traffic office,—that is correct, isn't it?

A. Yes, sir.

Q. And then your solicitors are supposed to solicit business on those rates?

A. Yes, sir.

Q. And in this case this 10 cent rate has been in a very considerable time, hasn't it?

Mr. Holden: That is a divisionable rate, isn't it, more accurately, than a rate?

A. Several years.

Q. That is what I mean,—several years.

A. I don't know how far back it goes. They formerly got 12 cents.

Q. I know, but since the 12 cent rate they got 10 cents?

A. Yes, sir.

By Mr. Walter:

Q. Whenever the traffic department finds out that a rate it has in is losing money, you cancel that rate, don't you?

A. Yes, sir.

Q. It costs you more than you get out of it, don't it?

A. Yes, sir; unless there are some indirect benefits arising from its continuance, or unless it is a part of a general adjustment of rates, which, in the aggregate, represent the profit.

Q. So that the traffic department does not allow, as a rule, rates to remain in effect from which the service costs more than the revenue: that is a rule, isn't it?

A. Why, no. If the rate does not benefit us, all things considered, we ought to take it out, and do.

Mr. Teal: Then it is the general body of rates you figure on—not specific rates?

The Witness: Yes, sir.

By Mr. Walter:

Q. Isn't it also true, Mr. Woodworth, that the price of the logs you were speaking about meant for logs delivered to the mills of the lumbermen?

A. The figures in this table, as I understand it, represent logs delivered at the mill.

Q. And the cost of delivery sometimes runs up as high as $6 a thousand feet?

A. I know of no case like that out in that country.

Q. Don't you know the testimony in the case before the Commission shows that very fact?

Mr. Dillard: Well, it shows the stumpage on the ground, too.

The Witness: That certainly wasn't the cost of transporting logs to any mill.

Q. Now, take the cost of transporting logs to Portland.

Mr. Holden: You don't claim that the transportation cost was $6 a thousand, do you?

Mr. Walter: Yes, to get it to the mills in Portland, in the log.

Mr. Holden: Oh, no. That is the log and everything else.
The Master: The log and the stumpage.
Mr. Holden: Yes, the whole works.
Q. Do you know what the cost of stumpage is?
A. It was originally about 50 cents, and lattterly about $3.
Q. So that the $2.70 advance would leave about 30 cents for stumpage?
A. The testimony in Washington, as I remember, showed the price of stumpage went up as high as $4, in some cases.
Mr. Holden: I don't remember what the record is about that; but it is all in the record.
Q. So that that increase of $2.70, if taken from the stumpage, a man who owns the logs, the standing timber,—it would leave him for his stumpage less than he was receiving for stumpage in 1892,—at least, not more than that?
Mr. Holden: Wouldn't it be fair, Mr. Walter, to direct attention to the particular figure?
Mr. Walter: I just want to see what Mr. Woodworth knows.
Mr. Teal. That is a fair statement based upon your question, absolutely.
Mr. Holden: I treated it, based on the order of the Commission.
Mr. Teal: We never assume the Commission is wrong. If you assume the Commission is right, Mr. Walter's question is right. If stumpage is worth $3 free of the charge of getting it to the mill, and this $2.70 comes out of stumpage, you will contend it leaves that stumpage worth 30 cents on the ground?
Mr. Holden: That is not a fair statement. We are not contending it comes out of stumpage exclusively of logs. The stumpage man is not the exclusive man involved in the proposition, and your own people complained about the enormous expansion in the log price, and, as one of your witnesses say, they stood an advance of $3 in ten years. So it is not fair to say that the stumpage man was the only man to be taken into consideration.
Mr. Teal: While you are on the stand, will you please state who is the middle man between the stumpage man and the manufacturer?
Mr. Holden: The log manufacturer is in there for about a ten-dollar raise in three years.
Mr. Walter: Wasn't that due to the Valparaiso and the San Francisco disaster?

Mr. Holden: Practically. They took advantage of their opportunity and expanded that price beyond all conscience.

Mr. Walter: They are not the only hold-ups.

By Mr. Holden:

Q. I want to ask one question, Mr. Woodworth. Mr. Teal directed your attention to certain financial figures relating to the Northwestern Improvement Company. You stated that none of the dividends, so-called,—the proceeds—came out of the operation of the Northern Pacific Railroad Company. So far as your knowledge goes, did any of that money involved in those figures come out of the operations of the lumber traffic, or any other operations of the railroad, from transportation?

A. That is what I said. It did not come out of the earnings of the railroad. It came from whatever may be the business operations of the Northwestern Improvement Company, and that does include the ownership and operation of coal mines.

On stipulation of the parties the master ordered that the testimony of the various witnesses need not be signed or read.

Mr. Dillard: At the request of counsel for defendants, I read into the record the following statement showing the amount of lumber carried on the Union Pacific system, by which is meant the Union Pacific Railroad, the O. R. & N. and the O. S. L., for the fiscal years 1904 to 1908, inclusive.

In the year 1904 the lumber carried was 8.57 per cent of all commercial trade.

In the year 1905 it was 8.62 per cent.

In 1906 it was 9.93 per cent.

In 1907 it was 9.58 per cent.

In 1908 it was 10.18 per cent.

An adjournment was thereupon taken until the morning of Monday, April 26, 1909, at 10 o'clock, at the Federal Building in St. Paul, Minnesota.

TRANSCRIPT OF RECORD

SUPREME COURT OF THE UNITED STATES

OCTOBER TERM, 1911

No. 451

THE INTERSTATE COMMERCE COMMISSION
ET AL.

vs.

[illegible]

APPEAL FROM THE [illegible]

IN THE

Circuit Court of the United States.

FOR THE DISTRICT OF MINNESOTA,

THIRD DIVISION.

UNION PACIFIC RAILROAD CO., Oregon Short Line Railroad Co., Oregon Railroad and Navigation Co., Southern Pacific Co., Northern Pacific Railway Co., Great Northern Railway Co., Chicago, Burlington and Quincy Railroad Co., and Oregon and California Railroad Company, Complainants,

v.

THE INTERSTATE COMMERCE COMMISSION, Defendant.

In Equity. No. 883.

NORTHERN PACIFIC RAILWAY CO., Great Northern Railway Co., Chicago, Burlington and Quincy Railroad Co., Union Pacific Railroad Co., Oregon Short Line Railroad Co., and Oregon Railroad and Navigation Company, Complainants,

v.

THE INTERSTATE COMMERCE COMMISSION, Defendant.

In Equity. No. 884.

GREAT NORTHERN RAILWAY CO., Northern Pacific Railway Co., Chicago, Burlington and Quincy Railroad Co., Union Pacific Railroad Co., Oregon Short Line Railroad Co., Oregon Railroad and Navigation Co., and Southern Pacific Co., Complainants,

v.

THE INTERSTATE COMMERCE COMMISSION, Defendant.

In Equity. No. 885.

HON. FREDERICK N. DICKSON, Master.

TRANSCRIPT OF RECORD.

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Room 326 Federal Building, St. Paul, Minn.

Monday, April 26, 1909, 10:00 o'clock a. m.

Proceedings were resumed before Special Master Frederick Dickson, at the above time and place.

Present:

On behalf of the Complainants, Mr. Hale Holden and Mr. Charles Donnelly.

On behalf of the Defendant, Mr. Luther M. Walter and Mr. J. N. Teal.

Mr. Donnelly: If your Honor please, before proceeding with Mr. Hogeland's testimony, I wish to introduce in evidence some of the information, in the form of exhibits, that was called for by Mr. Teal in connection with Mr. Darling's testimony, containing a copy of the estimate of Mr. Darling in the Spokane rate case, which may be introduced in evidence (and I believe was introduced in evidence) and marked Defendant's Exhibit 1 (Darling). We now substitute that copy for the original which has been withdrawn. We introduce it as part of the cross-examination.

(Said paper was marked "Defendant's Exhibit 1 (Darling)."

Mr. Donnelly: Now, in connection with that sheet of Mr. Darling's Exhibit 4, which is headed "Mileage not included in operated mileage statement of April 12, 1909," I desire to introduce in evidence an additional sheet that may be marked "Complainants' Exhibit 12" and that will give in detail the information as to that mileage that is not included in "Operated Mileage," as so appears in the original exhibit.

Mr. Teal: It is a new exhibit?

Mr. Donnelly: It is a new exhibit, but it is to be read in connection with Complainants' Exhibit 4, and particularly in connection with that sheet of Complainants' Exhibit 4 that is headed the same way as this exhibit is.

COMPLAINANT'S EXHIBIT 12 (DARLING).

MILEAGE NOT INCLUDED IN OPERATED MILEAGE STATEMENT OF APRIL 12th, 1909

Description.	Total Mileage.		N. P. Equivalent Mileage.		Remarks.
	Main Track.	Spurs, Yard Trks. and Sdgs.	Main Track	Spurs, Yard Trks. and Sdgs.	
Lines in Manitoba	354.65	47.08	354.65	47.08	100% owned by N. P. Ry.
St. P. Un. Dept. Co	0.56	8.68	0.06	0.96	N. P. owns 1/9 interest.
Minn. Transfer Ry	.....	79.74	.....	7.97	N. P. owns 1/10 interest.
Lake Supr. T. & T. Ry.	.....	20.59	.....	6.86	N. P. owns 1/3 interest.
N. P. Ter'l Co. of Ore	0.92	20.70	0.37	8.28	N. P. owns 40% interest.
B. F. & I. F. Ry	34.01	3.84	34.01	3.84	100% owned by N. P. Ry.
Minn. & Inter'l Ry	174.60	56.97	122.22	39.88	N. P. owns 70% interest.
SPOKANE, PORTLAND & SEATTLE RY.					
Vancouver-Kennewick	220.60	.....	110.30	.....	N. P. owns ½ interest.
Panco-Snake Riv. Jct	26.09	.....	13.05	.....	N. P. owns ½ interest.
S. R. Jct.-Spokane	119.01	.....	59.50	.....	N. P. owns ½ interest.
S. R. Jct.-Riparia	40.60	.....	20.30	.....	N. P. owns ½ interest.
ASTORIA & COLUMBIA RIVER RY.					
Goble to Halladay	79.70	.....	39.85	.....	N. P. owns ½ interest.
Warrenton-Ft. Stevens	3.80	.....	1.90	.....	N. P. owns ½ interest.
COLUMBIA RIVER & NORTHERN RY.					
Lyle to Goldendale	41.60	.....	20.80	.....	N. P. owns ½ interest.
Total	1,096.14	237.60	777.01	114.87	

Mr. Donnelly: Now, Mr. Teal called for a detailed statement as to the equipment, and I now have on hand that detailed statement, and I will offer it in evidence as Complainants' Exhibit 13.

(Said paper was marked Complainants' Exhibit 13.)

COMPLAINANT'S EXHIBIT 13 (DARLING).

Steam Locomotives.

Statement Showing the Number of Various Classes of Locomotives Owned by the Northern Pacific Railway Company as of April 12th, 1909.

Class	Number	Class	Number	Class	Number
B	21	F1	32	P1C	11
B1	2	F2	2	P2	3
B2	1	F3	8	P2C	7
B5	2	F4	3	P3C	20
C1	11	F5	2	Q	20
C2	2	F6	1	Q1	48
C3	37	F7	2	Q2C	2
C6	33	G	9	Q3	10
C7	1	H1	1	RC	20
C10	1	H2	1	SC	15
C19	4	H3	1	S1C	14
C20	6	I	16	S2C	30
C21	3	I2	3	S3C	24
C22	4	K	4	S4C	40
C23	4	K1	28	S10	10
C27	1	K2	1	S11	3
C30	4	L	3	T	150
C31	2	L1	2	V	3
D	12	L2	10	V2	1
D1	6	L3	1	W	160
D2	22	L4	3	WTC	20
D3	79	L5	3	XC	4
D5	3	L6	20	YC	14
D5C	19	L7	16	Y1C	12
D6	4	L8	1	Y1TC	1
E	9	L9	70	Y2	4
E1	5	M	2	Y2TC	26
E2	14	N	3	Y3	1
E3	29	N1	3	Y3TC	13
E4	3	P	13	Y4	14
E5	2	PC	5	Y5	10
E7	3	P1	12	Z	16

Total 1,356

Estimated cost to reproduce $18,567,911.57

Passenger Train Cars.

STATEMENT SHOWING NUMBER OF CARS OF EACH CLASS OWNED BY THE NORTHERN PACIFIC RAILWAY COMPANY AS OF APRIL 12th, 1909.

Class	No. of Cars
Air Brake Instruction	1
Baggage	84
Business	12
Business Sup't	9
Cafe Observation	5
Chair	8
Coaches, First Class	255
Coaches, Second Class	132
Combination	67
Dining	47
Emigrant	5
Express	54
Mail and Express	76
Milk	2
Observation	18
Parlor	6
Postal	30
Tourist	69
Sleeper (½ interest)	103
Total	983
Cost to reproduce	$7,480,602.00

Freight Train Cars.

STATEMENT SHOWING NUMBER OF CARS OF EACH CLASS OWNED BY THE NORTHERN PACIFIC RAILWAY COMPANY AS OF APRIL 12th, 1909.

Class	No. of Cars
Box	23,757
Flat	7,701
Coal	4,184
Stock	2,676
Furniture	433
Refrigerator	1,436
Ballast	848
Slab	22
Oil Tank	12
Lidgerwood	552
Transfer	40
Hart Convertible	790
Total	42,451
Cost to reproduce	$36,593,737.00

MISCELLANEOUS EQUIPMENT.

STATEMENT SHOWING NUMBER OF CARS OF EACH CLASS OWNED BY THE NORTHERN PACIFIC RAILWAY COMPANY AS OF APRIL 12th, 1909.

Class	No. of Cars
Caboose, 4 Wheel	178
Caboose, 8 Wheel	594
Cinder	318
Water	79
Outfit	1,516
Boarding	123
Ballast Spreader	32
Weed Burner	3
Pile Drivers	14
Snow Plows	22
Tool	39
Pile Driver Tender	1
Scow Driver	2
Ditchers	5
Derricks	3
Wrecking Cranes	15
Wrecking Cars	12
Steam Shovels	27
Supply Cars	4
Dynamometer	1
Garbage	6
Plow Cars	27
Lidgerwood Unloader	17
Electric Crane	1
	3,039
Cost to reproduce	$1,978,710.00

FLOATING EQUIPMENT.

STATEMENT SHOWING FLOATING EQUIPMENT OWNED BY THE NORTHERN PACIFIC RAILWAY COMPANY AS OF APRIL 12th, 1909.

Transfer Steamer Tacoma.
Auxiliary Barge.
Ferry inclines at Kalama and Goble.
Cost to reproduce $612,400.00

Mr. Donnelly: Mr. Teal also called for certain information from Mr. Darling as to the estimates submitted by him of the cost of construction of certain new lines concerning which Mr. Darling testified; and also as to what those new lines had in fact cost in those cases where they had been completed. That information I now have, and will introduce a sheet containing it, which may be marked "Complainants' Exhibit 14."

(Said paper was marked "Complainants' Exhibit 14.")

COMPLAINANT'S EXHIBIT 14 (DARLING).

STATEMENT SHOWING APPROXIMATE ESTIMATES AND THE ACTUAL COST OF THE FOLLOWING PIECES OF RAILROAD CONSTRUCTION.

Made at the request of the Counsel for the Defense in the Lumber Rate Case.

	Main Track Mileage.	Original Approximate Estimate.	Date of Original Estimate.	Cost to February 28, 1909.
‡Lake Park to Glyndon:				
Main Track	26.83	$2,140,791.00	Jan. 27, '06	$3,301,863.03
Second Track	26.83			
Valley City Change of Line (Alta-Berea):				
Main Track	9.4	939,288.00	Feb. 28, '06 Feb. 13, '07 July 21, '07	1,303,091.17
Second Track	1.4			
Livingston to Muir:				
Main Track	12.10	778,500.00	June 1, '06	1,483,267.82
Second Track	10.54			
St. Regis to Paradise	21.80	1,446,742.00	Jan. 15, '07	2,322,693.09
White Pine Hill Grade Revision	28.40	1,676,208.00	Feb. 14, '07	2,455,288.19
‡Garrison to Missoula:				
Revision of Line and Grade:				
Main Track	30.333	3,510,266.00	June 14, '07	5,496,803.26
Second Track	30.333			
Second Track Work	39.230			
Line from Mandan South	72.00	2,741,872.66	Feb. 15, '08	No work done
Line up Cannon Ball River	90.00	No Estimate made.		No work done

‡Work in progress—not yet completed.

Mr. Teal: In connection with this exhibit in the Spokane case, and with one other here, I shall want to ask Mr. Darling a few questions.

Mr. Donnelly: Do you mean you want to ask him at this session?

Mr. Teal: Yes.

Mr. Donnelly: I don't know whether he will be here or not, but if he is—

Mr. Teal: Well, of course, if he is not here—

Mr. Donnelly: Of course, if he is not here he cannot testify. I am just stating I don't know whether he is here or not. I will send for him and we will have him here at the afternoon session.

ALBERT H. HOGELAND, being duly sworn as a witness on behalf of the complainants, testified as follows:

Direct Examination.

By Mr. Holden:

Q. Mr. Hogeland, you occupy the office of chief engineer of the Great Northern Railway Company?

A. Yes, sir.

Q. How long have you been connected with that Company?

A. About 30 years.

Q. Does that represent your railroad work, or have you had experience with other railroads than the Great Northern?

A. I have had about four years experience with the Northern Pacific, and the balance of my experience has been with the Great Northern and its antecedent lines.

Q. The predecessor company of the Great Northern was the St. Paul, Minneapolis & Manitoba and certain other subsidiary companies, was it not?

A. Yes, sir.

Q. And within the last year substantially all of the subsidiary companies have been merged into the Great Northern Company, have they not?

A. Yes, sir; I understand it that way.

Q. There are still certain terminal companies that are independent in their organization and maintain their independent corporate organization, but most of the so-called subsidiary companies have recently, within the last year, been merged into the main company?

A. Yes, sir.

Q. Will you state briefly the nature of your experience with the Great Northern property, as to what it has been?

A. I began in March, 1879; entered the service of the St. Paul & Pacific as a rodman. I continued as a rodman and leveler until September of that year. From September, 1879, until March, 1880, I was a leveler on surveys between St. Paul and Chicago under Mr. Stickney. From April 1880 until March 1882, I was leveler, topographer and transit man on surveys for the Northern Pacific in the Yellowstone and Rocky Mountain Division. From March 1882 until March 1884 I was assistant engineer on construction of the Bozeman Tunnel and a stretch of heavy work on each side of the tunnel.

Q. That is for the Northern Pacific?

A. That is for the Northern Pacific. From April 1884 until September of the same year I was an assistant engineer on surveys and construction of lines in North Dakota for the St. Paul, Minneapolis & Manitoba Company. From September 1884 until July 1885 I was assistant engineer on construction for the Northern Pacific in Wisconsin between Superior and Ashland. From July 1885 until the present time I have been continuously with the St. Paul, Minneapolis & Manitoba and the Great Northern in the following capacities: From July, 1885, until September 1890 I was assistant engineer on surveys and construction of lines on the eastern part of the system—Minnesota, North Dakota, South Dakota, and the Eastern part of Montana. In September 1890 I was appointed engineer of maintenance of way. I continued in that work until—I have got my dates a little mixed in the latter part of that. I had better refer—

Q. If you have any memorandum you may refer to it.

A. I think I said 1900, didn't I?

Mr. Teal: 1890, you said.

The Witness: 1890, that should have been.

Mr. Teal: That is what you did say.

The Witness: From July 1885 to September 1890 I was engaged in this work as assistant engineer, in Minnesota, North Dakota, South Dakota and Montana. Then from September 1890 to August 1896 I was engineer of maintenance of way of the Eastern district; and from August 1896 to March 1902 I was resident engineer of the eastern district of the system, and my duties in that capacity covered maintenance of way as well as construction work.

Q. How far West do the Eastern districts extend?

A. Extended to Great Falls and Cut Bank, which is in the central part of Montana. In March 1902 I was appointed assistant chief engineer; and in February, 1903, I was appointed chief engineer of the system.

Q. At the time you first went with the Manitoba Company what was the approximate mileage of the system?

A. Do you mean in 1879?

Q. Yes.

A. About 600 miles.

Q. And about how far west had it been constructed?

A. Only to the western boundaries of Minnesota.

Q. If I understand you, with the exception of the interval shown in your statement, when you were connected with the Northern Pacific Company, you have had personal connection with substantially all of the construction work that has been going on west of Minnesota and the additional lines in Minnesota, since 1879?

A. Yes. That is very largely true. For the construction west of Pacific Junction a separate organization was made and the work handled from Helena, Montana, for a period of about four years; and the engineer at the east end did not have to do with that construction, except in a general way.

Q. What did that construction cover?

A. That covered the construction of the Pacific extension.

Q. And your connection in a more direct way with that part of the system came later?

A. Later, yes, sir.

Q. And to what extent, speaking of the Pacific extension and also of the balance of the lines, when you had to do personally with the maintenance and reconstruction of the different parts of the system?

A. Why, I have had very largely to do with it.

Q. And in recent years, as shown by your statement, that class of work—not only maintenance, but of reconstructing lines and rebuilding them—has come under your direct supervision, has it not?

A. Yes, sir.

Q. You were asked to prepare, for use in this case, a series of tables showing your judgment of what it would cost.

Mr. Teal: Would you excuse me just a moment. I would a little rather have you, instead of telling the witness what he was asked, ask him what he was asked to do.

Q. Have you prepared a table of figures for use in connection with your testimony in this case?

A. Yes, sir; I have.

Q. And will you state what that table represents and what you were asked to incorporate in that table?

A. It represents the cost of reproduction of the Great Northern system as of June 30, 1908.

Q. Just what do you mean by the cost of reproduction? Just explain the theory and the basis upon which you have proceeded.

A. We proceeded first to tabulate the mileage of the entire system, main tracks and side tracks, then proceeded with the amount of grading, bridging, track material, buildings, shop machinery, tools, equipment, and every other item that entered into the system as it exists to-day. To these quantities we applied the prices prevailing during the year 1908, as far as possible—the entire statement being summarized and shown as the cost of reproduction of the system as of that date.

Q. Is there anything included in the tables you have referred to, outside of the property used in the operation of the Great Northern Lines and its subsidiary companies or companies that furnish facilities for the operation of the line?

A. No, there is nothing outside of that but what is used in connection with the system and the operation of the system.

Q. That is what I want to get it. This covers the operating properties?

Q. Then, if I understand your statement it represents your judgment of what it would cost to have reproduced the system as of June 30, 1908?

A. It does.

Mr. Teal: May I ask just one question. Is it everything new on that date?

The Witness: Y[illegible]ir; reproduction new on that date.

Mr. Holden: Now if you will produce the statement we will have it marked "Complainants' Exhibit 15 (Hogeland)."

(Said paper was marked "Complainants' Exhibit 15 (Hogeland)."

COMPLAINANT'S EXHIBIT 15 (HOGELAND).

GREAT NORTHERN RAILWAY.
COST OF REPRODUCTION OF THE SYSTEM.

June 30th, 1908.

	Main Track	6,760.66 Miles
	Second Track	147.57 "
	Side Track	1,620.75 "
	Total all Tracks	8,528.98 "
1	Engineering	$ 10,153,352.00
2	Right of Way, Station and Terminal Grounds	87,825,744.00
4	Grading	95,878,362.00
5	Tunnels	7,656,030.00
6	Bridges, Trestles and Culverts	19,385,741.00
7	Ties	20,142,783.00
8	Rails	36,577,990.00
9	Frogs and Switches	968,030.00
10	Track Fastenings and Other Material	7,864,950.00
11	Ballast	10,709,880.00
12	Tracklaying and Surfacing	7,927,147.00
13	Roadway Tools	172,800.00
14	Fencing Right of Way	956,415.00
15	Crossings and Signs	1,800,543.00
16	Interlocking and Other Signal Apparatus	586,886.00
17	Telegraph and Telephone Lines	1,879,992.00
18	Station Buildings and Fixtures	3,985,200.00
19	General Office Buildings and Fixtures	643,500.00
20	Shops, Engine Houses and Turntables	4,025,000.00
21	Shop Machinery and Tools	1,976,016.00
22	Water Stations	2,886,400.00
23	Fuel Stations	596,250.00
24	Grain Elevators	2,275,500.00
25	Storage Warehouses	34,800.00
26	Dock and Wharf Property	1,969,300.00
27	Gas Producing Plants	20,000.00
28	Miscellaneous Structures	3,071,020.00
29	Contingencies	16,628,797.00
	Total Road Items	$348,598,428.00
30	Steam Locomotives	16,210,048.00
31	Passenger Train Cars	5,810,775.00
32	Freight Train Cars	32,464,727.00
33	Work Equipment	1,481,772.00
	Total Equipment Items	$55,967,322.00

34	Legal, Organization and Other Expenditures	12,136,972.00
35	Interest during Construction	93,292,575.00
	Total General Expenditures	$105,429,547.00

SUMMARY.

Road	$348,598,428.00
Equipment	55,967,322.00
General Expenditures	105,429,547.00
	$509,995,297.00
36 Stores and Supplies on Hand	8,219,581.00
37 Lines under Construction	7,908,002.00
38 Interest in Terminal Railways	1,302,916.00
39 Interest in Spokane, Portland & Seattle Ry	21,827,521.00
Grand Total	$549,253,317.00

Chief Engineer's Office, April 15th, 1909.

GREAT NORTHERN RAILWAY.

MILEAGE.

June 30th, 1908.

	Main Track.	Second Track.	Side Track.	Total.
Wisconsin	32.19	18.18	59.73	110.10
Minnesota	2,052.56	99.81	614.38	2,766.75
South Dakota	262.36	.....	30.95	293.31
Iowa	76.58	.....	12.59	89.17
North Dakota	1,544.53	22.17	300.18	1,866.88
Montana	1,368.65	.....	274.18	1,642.83
Idaho	106.03	.....	17.51	123.54
Washington	814.86	7.41	225.25	1,047.52
Manitoba	161.71	.....	16.04	177.75
British Columbia	336.40	.....	49.56	385.96
	6,755.87	147.57	1,600.37	8,503.81
Duluth Terminal	1.82	.....	3.84	5.66
Minneapolis Western	1.69	.....	5.20	6.89
Union Terminal	1.28	.....	11.34	12.62
	6,760.66	147.57	1,620.75	8,528.98

Main and Second Track Mileage	6,908.23 Miles
Side Track Mileage	1,620.75 "
Total all Tracks	8,528.98 "

GREAT NORTHERN RAILWAY.

LINES IN OPERATION.

June 30, 1908.

WISCONSIN.		
State Line at Foxboro to Superior, including Connection with D. S. & W. at Saunders	21.88	
Boyleston Junction to State Line	10.31	32.19
MINNESOTA.		
St. Paul via Barnesville to International Boundary at Noyes, including Line to St. Vincent	392.72	
State Fair Grounds Branch, St. Paul	.64	
Coon Creek Junction to State Line at Foxboro	112.01	
To Quarries at Sandstone	2.61	
In Duluth	.38	
Elk River to Milaca	31.81	
East St. Cloud to Brookpark	58.30	
East St. Cloud to Sauk Rapids	2.13	
St. Cloud to Willmar	55.56	
Sauk Center to Cass Lake	140.00	
Evansville to Tintah	32.01	
Fergus Falls to Pelican Rapids	21.65	
Barnesville to State Line at Moorhead	22.79	
Moorhead to Redland	66.05	
Minneapolis to State Line at Breckenridge	208.56	
Hopkins Junction to Hopkins	3.57	
Spring Park Junction to Hutchinson	43.90	
Clearwater Junction to St. Cloud	63.08	
To Dam, St. Cloud	2.57	
Willmar to State Line south of Jasper	122.64	
South Dakota Line to Iowa Line	11.27	
Benson to South Dakota Line	46.18	
Morris to Browns Valley	48.60	
Yarmouth to North Dakota Line	9.18	
North Dakota Line to Moorhead	36.80	
Wisconsin State Line to Redland	247.94	
Brookston to Ellis	46.51	
Mississippi to Dewey Lake and Virginia	66.41	
Kelly Lake to Fermoy	23.40	
Kelly Lake to Exmore	9.69	
Red Lake Falls to Greenbush	61.23	
St. Hilaire to Wylie	7.49	
Crookston to East Grand Forks	23.60	
Branches to Mines	31.28	2,052.56

SOUTH DAKOTA.		
Minnesota Line near Jasper to Minnesota Line near Booge, via Garretson	12.66	
Garretson to Yankton	80.94	
Minnesota Line to Huron	115.31	
North Dakota Line to Aberdeen	53.45	262.36
IOWA.		
Minnesota State Line to Center of Division Street, Sioux City		76.58
NORTH DAKOTA.		
State Line at Fargo to Grand Forks	77.53	
State Line at Wahpeton to Devils Lake	180.60	
Minnesota State Line to Forbes	109.25	
Rutland to South Dakota Line	10.46	
Wahpeton to Minnesota State Line north of Lurgon	6.02	
Addison to Chaffee	11.78	
Casselton to Larimore	74.67	
Ripon to Portland Junction	41.09	
Grand Forks to Montana State Line	350.99	
Grand Forks to International Boundary at Neche	81.35	
Grafton to International Boundary north of Walhalla	53.44	
Larimore to Hannah	94.95	
Lakota to Sarles	73.13	
Churches Ferry to International Boundary north of St. John	59.08	
York to Dunseith	42.27	
Rugby to Antler	80.84	
Towner to Maxbass	46.10	
Granville to Sherwood	61.82	
Berthold to Crosby	89.16	1,544.53

MONTANA.		
North Dakota Line to Idaho Line	691.42	
Shelby to Great Falls	97.97	
Virden to International Boundary at Sweet Grass	36.54	
Columbia Falls to Lakeview	51.68	
Kalispell to Somers	10.45	
Rexford to International Boundary at Gateway	8.86	
Pacific Junction to Butte	290.78	
Great Falls to Judith Gap	121.17	
Armington to Neihart	38.27	
Gerber to Stocket	8.09	
Lewis to Sand Coulee	2.39	
Fair Grounds Branch, Great Falls	1.96	
B. & M. Smelter Branch, Great Falls	5.07	
Fair Grounds Branch, Helena	.68	
Mountain View Branch, Butte	3.32	1,368.65
IDAHO.		
Montana Line to Washington Line	80.24	
Bonners Ferry to International Boundary at Port Hill	25.79	106.03
WASHINGTON.		
Idaho Line to Seattle	386.91	
Hillyard to Spokane	4.30	
Colbert to International Boundary at Waneta	125.84	
Northport to International Boundary at Paterson	7.47	
Marcus to International Boundary at Laurier	27.66	
International Boundary at Danville to Republic	31.70	
Republic to Eureka Gulch	9.80	
Curlew to International Boundary at Midway	14.52	
International Boundary near Molson to International Boundary at Chopaka	48.46	
Everett to International Boundary at Blaine	89.10	
Anacortes to Rockport	57.72	
Belleville to Yukon	11.38	814.86
MANITOBA.		
International Boundary at West Gretna to Portage la Prairie (Mid. Ry. of Manitoba)	77.01	
International Boundary near Haskett to Morden (Midland Ry. of Manitoba)	15.25	
International Boundary near Bannerman to Brandon (B. S. & H. B. Ry.)	69.45	161.71

BRITISH COLUMBIA.		
International Boundary at Gateway to Michel (Crows Nest Southern Ry.)	74.18	
International Boundary at Waneta to Troupe Junct. (Nelson & Ft. Sheppard Ry.)	55.42	
International Boundary at Paterson to Rossland (Red Mountain Ry.)	9.59	
International Boundary at Laurier to International Boundary at Danville, including Line to Grand Forks (V. V. & E. Ry. & Nav. Co.)	16.47	
Grand Forks to Phoenix (V. V. & E. Ry. & Nav. Co.)	25.82	
Line to Granby Smelter (V. V. & E. Ry. & Nav. Co.)	4.74	
International Boundary near Midway to International Boundary near Molson (V. V. & E. Ry. & Nav. Co.)	28.89	
International Boundary at Chopaka to Keremeos (V. V. & E. Ry. & Nav. Co.)	18.20	
New Westminster to Vancouver (V. V. & E. Ry. & Nav. Co.)	14.79	
Cloverdale to Port Guichon (V. V. & E. Ry. & Nav. Co.)	17.31	
International Boundary at Douglass to Brownsville (New Westminster So. Ry.)	24.10	
International Boundary at Port Hill to Wilkes (Bedlington & Nelson Ry.)	12.04	
Sirdar Junction to Kuskonook (Bedlington & Nelson Ry.)	3.26	
Kaslo to Sandon, including Line from Cody Junction to Cody (Kaslo & Sloan Ry.)	31.59	336.40
		6,755.87
DULUTH TERMINAL RAILWAY		1.82
MINNEAPOLIS WESTERN RAILWAY		1.69
UNION TERMINAL RAILWAY (SIOUX CITY)		1.28
TOTAL MILEAGE		6,760.66

ENGINEERING.

Estimated at 3% of all Road Items.
3% of $338,445,076.00 = $10,153,352.00

RIGHT OF WAY, STATION AND TERMINAL GROUNDS.

Right of Way, Station and Terminal Grounds as per schedule prepared by the Right of Way Department . . $87,825,744.00

GRADING.

Clearing	31,064 acres	$82.50	$ 2,562,780.00
Grubbing	565,530 sq. rods	1.65	933,125.00
Earth	160,896,792 cu. yds.	.31	49,878,006.00
Hard Pan	34,392,746 "	.45	15,476,736.00
Loose Rock	8,011,517 "	.55	4,406,334.00
Solid Rock	15,151,945 "	1.10	16,667,140.00
Rip Rap	1,794,278 "	2.00	3,588,556.00
Retaining Wall	92,275 "	9.00	830,475.00
Slope Wall	220,060 "	3.50	770,210.00
Crib work			765,000.00
			$95,878,362.00

TUNNELS.

6,993 lin. ft. unlined single track tunnel @ $70.00	$ 489,510.00
20,508 lin. ft. timber lined single track tunnel @ $120.00	2,460,960.00
19,952 lin. ft. concrete lined single track tunnel:	
Boulder 6,139′ @ $175.00 =	1,074,325.00
Cascade 13,813′ @ $195.00 =	2,693,535.00
5,141 lin. ft. concrete lined double track tunnel at Seattle, G. N. interest one-half	937,700.00
	$7,656,030.00

BRIDGES, TRESTLES AND CULVERTS.

Stone Arch, Minneapolis, 2,031 lin. ft	$ 867,000.00
Steel Bridges with masonry, 65,432 lin. ft	7,547,195.00
Wooden Bridges, 489,573 lin. ft	6,989,779.00
Permanent Culverts	2,928,408.00
Timber Culverts	1,053,359.00
	$19,385,741.00

TIES.

TRACK TIES:		
23,583,120 ties @ $0.82 =		$19,338,158.00
SWITCH TIES:		
9,724 sets @ $82.00 =		797,368.00
CROSSING TIES:		
177 sets @ $41.00 =		7,257.00
		$20,142,783.00

RAILS.

Main Track	756,927 tons
Side Track	163,274 "
	920,201 tons

Main and Side Track tonnage computed from Rail Records.

Average price per ton, including handling, inspection and freight, $39.75.

920,201 tons @ $39.75 = $36,577,990.00

FROGS AND SWITCHES.

Average price per set, including switch stand and bolts, lamp, lock, switch points, connecting and tie rods, plates, braces, clips, frog and guard rails, including freight charges, $95.00.

9,724 complete turnouts (except ties)	@	$95.00 =	$923,780.00
177 crossing frogs (except ties)	@	$250.00 =	44,250.00
			$968,030.00

TRACK FASTENINGS AND OTHER MATERIAL.

Angle Bars,	73,691 tons	@	$45.00 =	$3,316,095.00
Bolts and Nuts,	7,805 "	@	60.00 =	468,400.00
Spikes,	29,105 "	@	51.00 =	1,484,355.00
Tie Plates,	16,464,000 plates	@	.15 =	2,469,600.00
Rail Braces,	844,000 braces	@	.15 =	126,600.00
				$7,864,950.00

BALLAST.

3,591 miles of main track have a full ballast lift of 3,000 cu. yds. to the mile.

1,942 miles of main track have a partial ballast lift of 2,250 cu. yds. to the mile.

1,421 miles of side track have a partial ballast lift of 1,500 cu. yds. to the mile.

3,591 miles at 3,000 cu. yds	10,773,000 cu. yds.
1,942 miles at 2,250 cu. yds	4,369,500 cu. yds.
1,421 miles at 1,500 cu. yds	2,131,500 cu. yds.
	17,274,000 cu. yds.

Average price per cu. yd. including cost of loading, unloading, putting under track and dressing, maintenance and repairs of steam shovels, train service hauling, repairs of equipment, transportation of men, tools and supplies, $0.62.

17,274,000 cu. yds. @ $0.62 = $10,709,880.00

TRACKLAYING AND SURFACING.

Average cost per mile handling material, curving rails, laying and surfacing track, tie plating, train service hauling material to the front, repairs of equipment, transportation of men, tools and supplies, $900.00.

8,528.98 miles at	$900.00	$7,676,082.00
9,724 switches at	25.00	243,100.00
177 crossings at	45.00	7,965.00
		$7,927,147.00

ROADWAY TOOLS.

Cost of Sectionmen's and Bridge Carpenters' Tools, hand cars and push cars	$172,800.00

Fencing Right of Way.

Average cost per mile of standard Right of Way fence, including train service and transportation of material, labor and tools, $165.00.

Average cost per set Cattle Guards, including train service and transportation of material, labor and tools, $15.00.

5,403 miles of Right of Way fence	@	$165.00 =	$891,495.00
4,328 sets of Cattle Guards.....	@	$15.00 =	64,920.00
			$956,415.00

Crossings and Signs.

Grade Crossings (Plank, Spikes and Labor) =	$75,710.00
Track Signs.....	54,088.00
Overhead Bridges, Steel.....	1,474,696.00
Wood.....	198,049.00
	$1,800,543.00

Interlocking and Other Signal Apparatus.

Cost to reproduce interlocking apparatus.....	$400,574.00
Cost to reproduce block and other signal apparatus....	186,312.00
	$586,886.00

Telegraph and Telephone Lines.

Estimated cost of reproduction of Telegraph Line consisting of poles, cross arms, pins, glass, wire, etc., also quadruplex, instruments, batteries, furniture, etc., including train service, tools, transportation of men and material..... $1,879,992.00

As furnished by Superintendent of Telegraph.

Station Buildings and Fixtures.

PASSENGER DEPOTS, BRICK AND STONE.

Hamline.....	$ 3,500.00
Minneapolis.....	342,500.00
Wayzata.....	13,200.00
Litchfield.....	17,700.00
Willmar.....	22,500.00
Benson.....	24,800.00
Morris.....	9,400.00
Breckenridge.....	20,100.00
Anoka.....	6,500.00
St. Cloud.....	34,400.00
Sauk Center.....	6,600.00
Alexandria.....	29,200.00
Fergus Falls.....	20,800.00
Barnesville.....	13,300.00
Moorhead.....	7,700.00
Crookston.....	38,700.00

STATION BUILDINGS AND FIXTURES—(Continued).

Princeton	$ 17,200.00
Sioux Falls	17,300.00
Huron	8,600.00
Aberdeen	25,300.00
Sioux City	259,000.00
Ellendale	10,800.00
Fargo	50,800.00
Grand Forks	37,500.00
Mayville	4,800.00
Grafton	7,500.00
Larimore	17,300.00
Devils Lake	25,800.00
Rugby	21,000.00
Minot	19,800.00
Glasgow	10,900.00
Kalispell	10,400.00
Spokane	137,500.00
Bellingham	18,400.00
Seattle (G. N. Interest)	295,000.00
Brandon	42,000.00
Vancouver	12,500.00
	$1,660,400.00
Frame passenger depots	$1,588,400.00

FREIGHT DEPOTS, BRICK AND STONE.

St. Paul (2)	$ 96,500.00
Minneapolis (2)	79,900.00
Duluth	7,600.00
St. Cloud	13,200.00
Moorhead	4,400.00
Sioux City (2)	42,400.00
Fargo	18,200.00
Grand Forks	19,800.00
Minot	17,000.00
Havre	6,000.00
Great Falls	22,100.00
Spokane	22,500.00
Seattle (2)	80,000.00
Brandon	16,000.00
Vancouver	9,500.00
	$ 455,100.00
Frame freight sheds	$ 148,900.00
Loading platforms	$ 132,400.00

SUMMARY.

Passenger Depots, brick and stone	$1,660,400.00
Passenger Depots, frame	1,588,400.00
Freight Depots, brick and stone	455,100.00
Freight Depots, frame	148,900.00
Loading Platforms	132,400.00
	$3,985,200.00

GENERAL OFFICE BUILDING AND FIXTURES.

General Office Building, St. Paul, including fixtures and furniture and all equipment. Land value not included.	$643,500.00

SHOPS, ENGINE HOUSES AND TURNTABLES.

SHOPS.

Superior	$ 131,000.00
St. Paul	1,041,400.00
St. Cloud	82,600.00
Barnesville	25,200.00
Sioux City	12,500.00
Devils Lake	141,900.00
Havre	127,400.00
Great Falls	42,000.00
Spokane	149,000.00
Everett	70,200.00
	$1,823,200.00

Above does not include engine houses, turntables, cinder pits, water tanks and coal chutes.

Brick and stone engine houses, 628 stalls at $2,100.00	$1,318,800.00
Frame engine houses 132 stalls at 1,400.00	184,800.00
Turntables, steel or iron, 60 at $5,500.00	330,000.00
Turntables, frame, 9 at 1,800.00	16,200.00
Cinder Pits, Standard, 22 at 4,500.00	99,000.00
Cinder Pits, Old Style, 18 at 750.00	13,500.00
Store Houses, oil houses, sand houses and small shop buildings, other than those included in shop buildings above	239,500.00
	$4,025,000.00

SHOP MACHINERY AND TOOLS.

Machinery and Tools in Repair Shops	$1,726,466.00
Machinery and Tools in Engine Houses	249,550.00
	$1,976,016.00

Includes cost of machinery and tools, transportation and installing of same.

WATER STATIONS.

433 Water Stations, including tanks, pump houses, pumps, engines, windmills, standpipes, wells, reservoirs and all appurtenances for supplying locomotives with water, including transportation of men and materials	$2,886,400.00

FUEL STATIONS.

42 Standard fuel stations complete @ $9,500.00 =	$399,000.00
20 Standard fuel stations complete @ 7,500.00 =	150,000.00
63 Platform fuel stations, a portion with cranes and buckets @ $750.00 =	47,250.00
	$596,250.00

GRAIN ELEVATORS.

Superior S (steel)	$1,536,400.00
Superior X	370,000.00
Minneapolis	260,500.00
Seattle, Smith's Cove	108,600.00
	$2,275,500.00

Land value not included.

STORAGE WAREHOUSES.

Wool Warehouses at Armington	$2,500.00
Great Falls	8,200.00
Big Sandy	1,600.00
Chinook	2,500.00
Benton	5,000.00
Fruit Warehouse at Sioux City	15,000.00
	$34,800.00

DOCK AND WHARF PROPERTY.

Superior No. 1, including Dredging	$175,000.00
No. 2, including Dredging	80,800.00
No. 5, No. 6, including Dredging and Machinery	449,500.00
Flour Shed on Dock No. 2	142,800.00
Seattle, Smith's Cove, including Dredging	626,400.00
Warehouse on Smith's Cove Dock	113,900.00
Everett Dock and Elevator	250,000.00
Miscellaneous Small Docks	130,900.00
	$1,969,300.00

Land value not included.

GAS PRODUCING PLANTS.

Cost to reproduce acetylene gas plant at Mississippi Street, St. Paul, including building, compressors, tanks, etc., transportation of men and materials, $20,000.00.

MISCELLANEOUS STRUCTURES.

Division Office Buildings	$ 47,500.00
Section Houses, Boarding Houses, Bunk Houses and Hand Car Houses	1,238,480.00
Ice Houses	120,850.00
Commissary Buildings	13,500.00
Stock Yards	302,000.00
Track Scales	100,000.00
Snow Sheds	488,000.00
Snow Fences	377,360.00
Stone Quarry and Crusher Plants	45,000.00
Tie Treating Plant	85,000.00
Miscellaneous Small Buildings	253,330.00
	$3,071,020.00

CONTINGENCIES.

10% of the following items:

Grading	$ 95,878,362.00
Tunnels	7,656,030.00
Bridges, Trestles and Culverts	19,385,741.00
Ballast	10,709,880.00
Tracklaying and Surfacing	7,927,147.00
Fencing Right of Way	956,415.00
Crossings and Signs	1,800,543.00
Interlocking and Other Signal Apparatus	586,886.00
Telegraph and Telephone Lines	1,879,992.00
Station Buildings and Fixtures	3,985,200.00
General Office Building and Fixtures	643,500.00
Shops, Engine Houses and Turntables	4,025,000.00
Water Stations	2,886,400.00
Fuel Stations	596,250.00
Grain Elevators	2,275,500.00
Storage Warehouses	34,800.00
Dock and Wharf Property	1,969,300.00
Gas Producing Plants	20,000.00
Miscellaneous Structures	3,071,020.00
10% of	$166,287,966.00
	16,628,797.00

To cover the increased cost of the work due to all unforeseen causes, such as fires, floods, tornadoes, accidents, strikes, etc.

STEAM LOCOMOTIVES.

The coat to reproduce Steam Locomotives and Tenders, including appurtenances and fixtures necessary to equip them for service, $16,210,048.00.

Made up as follows:

Class.	Number of Engines.	Weight of Each.	Value.
A-1	1	$ 80,420	$ 6,836
2	2	103,300	17,561
3	2	108,200	18,394
4	3	87,050	22,198
5	15	102,550	130,751
6	4	138,100	46,954
7	10	130,800	111,180
8	3	134,110	34,198
9	46	156,480	611,837
10	5	148,480	63,104
B-1	1	88,700	7,539
2	1	99,600	8,466
3	3	82,800	21,114
4	4	88,000	29,920
5	4	94,975	32,292
6	6	109,250	55,717
7	1	99,400	8,449
8	5	93,500	39,738
9	8	93,900	63,852
10	7	93,800	55,811
11	2	118,900	20,213
12	1	106,600	9,361
13	10	98,300	83,555
14	6	91,600	46,716
15	9	93,600	71,604
16	4	102,650	34,901
17	3	90,800	23,154
18	2	94,500	16,065
19	35	99,000	294,525
20	10	118,500	100,725
21	19	117,210	180,794
22	5	117,210	49,814
23	1	126,000	10,710
D-1	3	123,600	31,518
2	59	122,510	614,388
4	27	145,480	333,877
5	27	152,900	350,905
E-1	2	134,650	20,736
3	10	190,600	146,762

Class.	Number of Engines.	Weight of Each.	Value.
4	2	118,200	$ 18,203
E-6	15	193,000	222,915
7	19	161,200	235,836
8	20	206,200	317,548
9	2	165,280	25,453
10	8	192,215	118,404
11	1	160,600	12,366
12	2	157,600	24,270
13	2	147,000	22,638
F-1	65	159,050	796,045
2	5	165,980	63,902
3	1	190,450	14,665
4	1	169,400	13,044
5	15	225,400	260,337
6	20	233,300	359,282
7	10	225,600	173,712
8	125	227,140	2,186,223
9	25	230,950	444,579
10	1	229,850	17,698
G-1	16	169,500	208,824
2	19	190,350	278,482
3	50	211,150	812,927
4	10	211,750	163,048
5	7	230,475	124,226
H-1	6	242,900	112,220
2	34	255,900	669,176
3	1	255,600	19,758
J-1	49	234,800	885,900
2	100	234,800	1,807,960
3	1	234,800	18,080
K-1	10	233,800	180,026
L-1	22	374,800	634,911
2	45	318,000	1,116,870
VVE	3	105,133	24,286
	1,078		$16,210,048

Passenger Train Cars.

The total cost to reproduce the Passenger Train Cars on the System amounts to			$5,810,775.00
Made up as follows:			
38	Postal Cars	$ 221,612	
38	Baggage and Mail Cars	137,885	
47	Baggage, Mail and Express Cars	253,949	
48	Baggage Cars	204,803	
40	Baggage and Express Cars	195,247	
38	Express Refrigerator Cars	130,095	
36	Passenger and Baggage Cars	110,436	
163	Coaches—Second Class	843,041	
24	Smoking Cars	180,506	
144	Coaches—First Class	1,248,125	
32	Tourist Cars	260,023	
3	Dining and Parlor Cars	39,470	
27	Dining Cars	383,031	
18	Buffet Parlor Cars	196,043	
70	Sleeping Cars	1,091,780	
11	Observation Cars	183,560	
24	Official Cars	128,514	
1	Air Brake Instruction Car	2,655	
802	Cars	$5,810,775	

Freight Train Cars.

The total cost to reproduce the Freight Train Cars on the System amounts to			$32,464,727.00
Made up as follows:			
26,542	Box Cars	$19,704,510	
590	Refrigerator Cars	559,224	
49	Beer Cars	29,087	
12	Fruit Cars	6,609	
5	Hay Cars	2,012	
989	Furniture Cars	658,659	
2,005	Stock Cars	1,162,173	
4,046	Flat Cars	2,239,592	
828	Sand Cars	475,753	
624	Coal Cars	340,214	
1,401	Gondola Cars	854,155	
447	Ballast and Ore Cars	597,229	
5,390	Ore Cars	5,481,842	
603	Cabooses	353,668	
43,531	Cars	$32,464,727	

Work Equipment.

The total cost to reproduce the Work Equipment on the System amounts to		$1,481,772.00
Made up as follows:		
620 Ballast Cars	$374,937	
126 Boarding Cars	70,613	
23 Supply Cars	15,518	
17 Derrick Cars	39,889	
15 Derricks (Steam)	204,633	
3 Locomotive Steam Cranes	25,392	
34 Tool Cars	23,274	
12 Pile Drivers	64,720	
20 Steam Shovels	190,454	
10 Rotary Snow Plows	207,111	
9 Snow Plows	33,586	
49 Dozers	33,080	
1 Flanger	236	
14 Carpenter Cars	10,160	
21 Dirt Unloaders	98,948	
1 Hydraulic Car	372	
105 Cinder Cars	51,316	
61 Water Cars	31,061	
15 Steam Shovel Tanks	6,472	
1,156 Cars	$1,481,772	

Summary.

Steam Locomotives	$16,210,048.00
Passenger Train Cars	5,810,775.00
Freight Train Cars	32,464,727.00
Work Equipment	1,481,772.00
	$55,967,322.00

General Expenditures.

Legal, Organization and Other Expenditures.

Estimated at 3% of total cost of Road and Equipment.
3% of $404,565,750.00 = $12,136,972.00

Interest During Construction.

Estimated at 24% of cost of Road and 12% of cost of Equipment.
24% of $348,598,428.00 = $86,576,496.00
12% of $ 55,967,322.00 = 6,716,079.00

$93,292,575.00

STORES AND SUPPLIES ON HAND.

Total value of general material carried by storekeepers on the System, June 30th, 1908	$8,219,581.00

LINES UNDER CONSTRUCTION.

Value of Right of Way and Station Grounds on lines under construction	$ 258,656.00
Money expended on lines under construction except for Right of Way and Station Grounds	5,171,283.00
Value of material in stock on lines under construction	954,627.00
Value of terminal properties at Winnipeg and Tacoma	1,523,436.00
	$7,908,002.00

INTEREST IN TERMINAL RAILWAYS.

One-tenth Interest in Minnesota Transfer	$ 575,619.00
One-ninth Interest in St. Paul Union Depot Company	610,572.00
One-third Interest in Lake Snperior Terminal & Transfer Ry	116,725.00
	$1,302,916.00

INTEREST IN SPOKANE, PORTLAND & SEATTLE RY.

$21,827,521.00

Q. On the first page of this Exhibit, at the top, is shown a summary of the mileage of the entire system, is there not?

A. Yes, sir.

Q. And following that are 39 summarized items of the different elements that enter into the properties, and each of those summarized items is further dealt with later on in the exhibit and in more detail? That is the plan of the exhibit, is it not?

A. Yes, sir.

Q. Turning to the second page there is a more or less detailed statement of the mileage of the system in the different states through which it runs. It appears that there are 6,755.87 miles of main track of the Great Northern system, and certain additional main track of the Duluth Terminal, Minneapolis Western and Union Terminal Companies, making a total of 6,760.66 miles of main line track in the system. That is right, is it?

A. That is true.

Q. Now, the Duluth Terminal, the Minneapolis Western, and the Union Terminal—just state briefly what those are and what relation they have to the Great Northern property.

A. They are owned by the Great Northern—the Duluth Terminal being the line in Duluth; the Minneapolis Western being a switching line in Minneapolis; and the Union Terminal being a line in Sioux City, Iowa.

Q. And to what extent are those lines terminal facilities of the Great Northern system?

A. They afforded the Great Northern terminal facilities in those states, or partly so.

Q. There is a total of 147.57 miles of second track in the system and 1,620.75 miles of side track, making a total, including the terminal companies you have referred to of 8,528.98 miles of track.

A. That is true.

Q. Now that is actual mileage, taken from actual records, is it not?

A. Yes, sir; as it existed on the date of June 30, 1908.

Q. Following upon that I find on pages 3, 4, 5, 6, 7 and 8, a further detailed showing of the mileage in the different states. I will ask you how those mileages have been arrived at.

A. They are arrived at from actual records of the lengths of each portion of line specified, both for main tracks and side tracks.

Q. I notice on page 8 that the total mileage seems to apply to the main track mileage only. If I am correct about that it would seem that these pages, 3 to 8, inclusive, cover only main line mileage. Is that not true?

A. That is true. The side track mileage is not shown in detail for each portion of the line listed on pages 1 to 8.

Q. Turning to page 9, the first item shown there is "Engineering," which is estimated at three per cent of $338,445,076, which results in a sum equal to $10,153,352. What is meant by "Road Items?"

A. All of the items from 2 to 29, inclusive, being the items that go to make up the road-bed, of the right of way buildings, of the purchases, and practically all items except equipment.

Q. And the general expenses shown in items 34 and 35, and subsequent items thereto?

A. Yes, sir. Those are included under "General Expenditures."

Q. But the engineering has been figured on the items 2 to 29, inclusive?

A. Yes, sir; that is right.

Q. Now will you state briefly just the basis upon which you arrived at 3 per cent, and just what this item means?

A. It is to cover the cost of engineering in laying out the various lines and supervising the construction of them, and is found to be, from experience, very closely represented by 3 per cent of those construction items.

Q. Well, are you referring entirely to your own experience, or to your general knowledge of the sum of engineering experience, in providing a figure for the cost of engineering work in the construction of railroad lines?

A. I am referring to my own experience as well as the general experience of other engineers as to that item.

Q. You are familiar with the views of the profession on that subject, are you?

A. Yes, sir.

Q. And with that in mind what do you say as to 3 per cent being a conservative and generally accepted basis for figuring the cost of engineering for constructing railroads?

A. I think it is a very fair percentage and represents very closely the cost of that item.

Q. During your connection with the Great Northern Road, to what extent have you had to do with the making and checking of estimates for new work and also for reconstruction of lines?

A. I have had very largely to do with that—both with the preparation of the estimates and the supervision of the work, and a pretty fair knowledge of what the work has actually cost.

Q. You have been with the system long enough to have not only had to do with the planning out and making estimates for projected work, but to have also seen just how the results have worked out at the completion of the work and how the estimates have checked with the actual results, have you not?

A. Yes, sir.

Q. The next item on page 9 shows the figure relating to the right of way, station and terminal grounds, and that figure, as the exhibit states, was prepared by the right of way department and turned over to you for incorporation in this exhibit, was it not?

A. Yes, sir.

Q. And it is not a part of your work, or in your department, to deal with land matters embraced in that figure?

A. No, sir.

Q. Now the next item is grading, which corresponds with item 4 on the first page of the exhibit. Will you state briefly how that item of grading was arrived at, both as to quantities and prices?

A. The quantities for the various items of grading are made up, as far as possible from our records of the quantities that are actually in the road-bed in various parts of the system, as of that date, and the prices are based upon what work has cost us, and my judgment, and what it would cost us to reproduce the various classes of the grading work as specified.

Q. What have you to say as to the classification of different kinds of grading work shown on this page? Are those divisions of the different kinds of work customary divisions among the railroad engineers?

A. Yes, sir; and especially in the northwestern states.

Q. Now, in reference to the matter of the quantities, the number of acres of clearing—that, I take it, is substantially, actual from your records?

A. Substantially so.

Q. "Grubbing," the square rods shown there: Is that substantially from your records?

A. That is substantially from the records.

Q. When you say "substantially" I wish you would make it clear to the Master just what is meant.

A. I mean by that that wherever our records are complete those records have been used in taking these quantities. For a great many of the lines the records are not complete, and for those it was necessary to estimate from the maps and profiles the amount of clearing and grubbing that would be required.

Q. And what you have said is true also of grading, is it not?

A. It is true also of grading.

Q. Now, I want the master to understand just why there is a differential occasionally in records, not only of this Company, but perhaps of others. Do you know how long ago the beginning of the Great Northern lines was?

A. About 1862.

Q. And it was in 1879 that you came to the property, and

there were about 600 miles had been constructed prior to that time?

A. Yes, sir.

Q. In the state of Minnesota?

A. All, in the State of Minnesota.

Q. Will you state to what extent there are actual records of the early construction work of the original lines in Minnesota—just to give the Master and counsel on the other side an idea of the conditions in that regard.

A. The records of the earlier lines are very incomplete. Sometimes you can find a portion of the grading, but not a complete record of the grading, on the different lines. That applies also to a number of the lines which have been purchased—that is, were constructed by other companies and afterwards purchased by the Great Northern system. For those, a great many of them, no original quantities can be found.

Q. Can you state what percentage of the total grading shown on page 9 of this exhibit is taken from actual records?

A. We have 56 per cent as taken from actual estimates as returned for contractors.

Mr. Teal: Contract work? Actual contract?

The Witness: Yes, sir. And 26 per cent extra work done since construction, on record. Those two make a total of 82 per cent, which is the amount which was taken from our records. In addition to that, to secure the balance of the grading, 12 per cent has been taken from profiles, and 6 per cent has been taken from extra work done, of which we have no complete record.

Mr. Teal: Estimate?

The Witness: Estimate. Now, in regard to these profile estimates, I should say that for a number of the lines where we did not have the original quantities paid contractors, or the items of extra work done since construction, that we did have correct profiles of the line.

The Master: The original lines that were used.

The Witness: Yes, sir; generally original ones. I think in practically all cases original ones. And from those an estimate of the quantities in the road-bed has been made. That is what I refer to as 12 per cent, as taken from profile estimates.

Q. You say an estimate has been made from the original profile. Will you just explain how that estimate was worked

out, or, to shorten the matter up, you took the present situation, as compared to the original profiles, did you not?

A. It might be well to explain.

Q. I wish you would.

A. These profiles show a section of the ground—original ground surveys and the grade line, which would represent cuts and fills. Now from such a profile, from the tables of quantities prepared for engineers' use, the cubic yards of material to be moved from a certain cut to make a certain fill are estimated, and in that way the total quantities required to construct the road-bed, according to that profile, can be arrived at. In the absence of original estimates, that is about the only way that you can arrive at the quantities.

Q. Well, how would you characterize a profile estimate as compared to work on record?

A. Why, it is not nearly so good, not nearly so accurate, for the reason—

Q. It is not such an estimate as you have made for the last item of six per cent of extra work on record? It does furnish, in other words, some basis, by means of record, for computing quantities, doesn't it?

A. Oh, yes, sir. The only way you are likely to be far astray from the correct quantities is in the settlement which takes place and which you cannot tell much about from a profile.

Q. Well, you mean by the settlement of material put in that goes down into the ground? Now, that, you say, from a profile estimate, you cannot estimate how much of that has disappeared?

A. No, that is largely something that you must take from soundings, if there are any, of the particular piece of ground that has settled so badly, or from your knowledge of the conditions that existed.

Q. Well, how would that result? Against the interest of the railroad or in its favor, in so far as the quantities are concerned?

A. Well, the tendency would be, as a rule, not to get less quantities than would actually be required to carry out the work.

Q. Because of the subsidence that has gone on over a period of years in the quantities actually put in?

A. Yes, sir.

Q. I think your answer said the tendency—Read the last answer.

(Last answer read.)

A. That "not" should come out. The tendency would be to get less quantity, I intended to say.

Q. Now, 56 per cent of these quantities on the entire system is based upon actual estimates returned to contractors. Just explain that term. What do you mean by that?

A. Whenever a piece of grading is done by a contractor, the quantities of the various classes of material moved are measured and estimated, and the contractor is paid by a voucher, and from those vouchers these quantities have been taken.

Q. Well, are the quantities embraced in this 56 per cent the quantities that the railroad company and the contractor measured up and settled upon?

A. Yes, sir.

Q. The 26 per cent extra work on record: Will you just explain how that was arrived at and what it means.

A. That covers work done since construction in the way of bank widening, widening cuts, putting in new side tracks, extending side tracks, double tracking, filling bridges, taking out sags, and all other work done in the way of improving and extending the property since construction, and is generally work which has been done by the railway company.

Q. And is all shown on your records?

A. Yes, sir. The items there—26 per cent of the total is a matter of record.

Q. Now you have finally but six per cent of extra work which is not on record and which is an estimate. Will you explain just how and why you arrive at that figure.

A. That is put in from my knowledge of the various lines and the completeness of the records of the work done on those lines. For many of the lines the records of work done in the way of additional side-tracks, side track extension, bridge filling, bank widening, are incomplete. Some of them show nothing at all as having been done, and we knew that some work of that kind had been done, and this is put in from my knowledge of the lines and the work that has been done, I think, in addition to what is shown in the other three columns. It is not put in as 6 per cent on total. Each line has been gone over, and the addition which appeared to me fair has been made, and when we total it, it amounts to about 6 per cent of the total yardage. On some lines there has been no addition made—on many lines there has been no addition made.

Q. But this figure has resulted from a consideration of different lines and different parts of the system?

A. It has been made from a consideration of each particular line and what, in fairness, should be added to the quantities in the other three columns, if at all, to give the total quantity of grading on each line as it exists to-day.

Q. Have you the details which go to make up this 6 per cent estimate that you have made, so that they can be produced and examined by counsel on the other side, if desired?

A. Yes, we have details of the entire grading. The way it was made up—

Mr. Teal: You don't limit that to being examined by counsel, do you?

Mr. Holden: Anybody that the counsel might select.

Mr. Teal: That is better.

Q. Now, generally speaking, Mr. Hogeland, will you state whether or not the records that you have referred to, and which have been made use of for the preparation of this exhibit, are at hand and open to examination by the other side, to the fullest extent they may desire?

A. Yes, sir; I understand they are.

Mr. Teal: You have these different items segregated at the present time, haven't you? I mean the way you have arrived at these different estimates the papers are all segregated?

The Witness: The papers, of course, are not separated in a way that could probably produce one statement to show the thing without combining it, because it appears in a number of statements and estimates and papers, but it is not combined so as to show.

Mr. Teal: Well, the facts are all in your office.

The Witness: Yes.

Mr. Holden: To facilitate your examination of them in any way possible.

Mr. Teal: I thought possibly you had that 6 per cent. in one bunch—

The Witness: I haven't it together, but I could get it together.

Mr. Walter: So as to save sending these various papers back to the departments that he may hold in his department—

Mr. Holden: Any examination you desire to have made we will facilitate and give you assistance.

Mr. Teal: We understand that. All I want is that he will keep them together and not let them get away.

The Witness: Yes.

Q. Now, I did not ask you, and I am not clear in my own

mind, over how many of the items shown on page 9, entitled "grading," your testimony covered. Does that include—

Mr. Teal: Cover them all, wouldn't it?

Q. Does that include the riprap and retaining wall work, or did it stop with solid rock?

A. These percentages I have given you apply only to grading.

Mr. Teal: But this is all headed "Grading."

The Witness: What engineers more particularly call "Grading."

Q. Just identify the items that you refer to in your testimony.

A. It refers to the earth work, hard pan, loose rock and solid rock.

Q. You have already testified about the clearing and grubbing. Now passing on to the rip rap, how have the quantities of that been arrived at, with reference to your records?

A. That has been made up from a recent examination of the amount of rip rap as it exists on the line as taken from measurements made by the various resident engineers, and engineers under them, so as to show the amount of riprap that exists in the lines as of this date.

Q. And you have the reports made from these actual measurements that you refer to, for production, if necessary?

A. Yes, sir.

Q. Retaining walls: Please tell us about that.

A. Retaining wall and slope wall, taken from our records or measurements furnished by our resident engineers.

Q. If I understand you, as to riprap, retaining wall and slope wall, there is no estimate, but it has all been made from actual records, or from actual measurements recently made?

A. Yes, sir.

Q. Crib work; how about that?

A. Crib work has been taken partly from our records as such work was carried out during construction, and from my knowledge of what exists on the different lines.

Mr. Teal: Is that late work, or has it been going on all the time—the crib work? Does it cover, I mean, a construction for a period of a number of years?

The Witness: It covers what has been put in during construction, as well as what has been added to since construction.

Mr. Teal: It hasn't been put in in the last year or two, has it?

The Witness: Oh, no, sir; very little of that has been put in recently.

Q. To what extent is that item covered by record or actually taking into account of the work that is actually on the ground and subject to measurement and calculation?

A. As I said, that has been partly from the records and partly from my own knowledge of what exists, as well as reports which our resident engineers have made in regard to it.

Q. So to what extent would you say that that item was substantially an item of actual quantities of work done?

A. Why, I think it represents just as closely as possible what actually exists.

Q. Now, I would like to have you state the basis of the prices that you have applied to these different items and the reasons which have led you to arrive at these prices. Taking "Clearing": You show a price of $82.50 per acre.

A. That is, the entire prices are based on contract prices for carrying out such work to which must be added any transportation charges for men, outfits and material, and of extra work which would necessarily go along with the different classes of work and would not be covered in a contract price.

Q. I wish you would state, generally speaking, what the difference is between contractors' prices and the extra work which is not included. I mean, limiting this question to clearing, but I want you to state generally as to this kind of work—just what is embraced in those two items.

A. The ordinary contracts provide for the Railway company to furnish free transportation to contractors, and the prices which they make are based on that; so that in putting a price down opposite each item it is necessary to take that into consideration to make a certain increase in the price as paid contractors to cover the transportation which the Railway Company usually furnishes the contractor.

Q. Now, right there: This transportation you speak of has reference to this kind of work, clearing, grubbing, grading and rock work, if done by contract, and also certain other classes of work, such as ballasting; but you are not now speaking, in using the word "transportation" of free rates on things such as rails, or anything of that kind?

A. Not at all.

Q. Just what do you mean in dealing with this kind of items in the term transportation?

A. I had reference to the transportation of the contractor's outfits, supplies and men.

Q. From what point to what point, generally speaking?

A. From whatever point is necessary to secure the outfits and the men to the work.

Q. Would it be from a point off your line, or do you mean from a point on your line, out to the front where the work is to be done?

A. That would depend on where the contractor's outfit originated. It would depend altogether on the nature of your arrangement with the contractor.

Q. Then if I understand you, this term "transportation" means broadly the furnishing, free to the contractor, transportation for his plant and his men and his materials to the place where the work is to be done? That is right, is it?

A. Yes, sir; that is what I mean.

Q. And does it also have reference to transportation of men and materials during the progress of the work?

A. Yes, sir; whatever is required to carry on the work.

Q. The men in front who may quit and leave the work, and other men who may have to be provided to go and take their places—Does it cover that?

A. Yes, sir; as well as supplies for the up-keep of these men.

Q. You say the contractor makes a bid or a price on the basis of the railroad company providing him these items of transportation, without cost to him. Is that a part of the extra bills over and above the contractor's price—this transportation item?

A. That is a part of the increased cost over the prices paid contractors. In addition to that there would be any bills for extra work properly chargeable to grading which could not and are not paid under the contract. For instance, ditching, road changes, and many items of that kind, which have to be taken and are paid for as an extra bill, properly chargeable against grading, but are not covered by contract price.

Q. Just illustrate that about a road change. Why is that an extra bill, and why doesn't the contractor take care of that in his price? What does it mean?

A. There are many pieces of work of that kind which a contractor cannot provide for in making a price per yard,

and all such work is carried out and paid for at actual cost, plus probably ten per cent., and it is paid for in that way; it is not paid for on a yardage basis, because it cannot well be covered in that way.

Q. What do you mean by a road change?

A. Wagon road change, I had reference to. That is one of the things that enters into it.

Q. Well, I say, what do you mean by a wagon road change? Just explain that.

A. Any wagon road changes that may be necessary to permit of the construction of the railroad.

Q. You mean a public highway crossing in the country?

A. Yes; where it may run parallel or alongside of the railroad and has to be changed.

Q. That kind of work and other kinds you refer to is not included in the contractor's bid made to the Company, for doing the work?

A. Not as a rule. Sometimes that class of work is paid for by the yard; but as a rule it is paid for as an extra bill.

Mr. Teal: Do you know of any railroad contracts that are made where that very extra work is not provided to be done, and to be paid for in the engineer's estimate plus about ten per cent. profit?

The Witness: Let in that way, did you say?

Mr. Teal: Yes. Isn't that the way all contracts are let? Haven't you got printed forms covering that very thing? In other words, doesn't every contract provide that the contractor shall do the extra work, that it shall be measured by the engineer, who shall be the sole judge of the cost, and he is paid ten per cent. over the cost for doing it?

The Witness: I don't think it is put that way in the contract. It may be in a great many contracts. We very seldom put anything of that kind in ours; but that is the way it would be done.

Mr. Teal: That is what I thought. That is the way we always did it—

The Witness: It is the reason why the yardage returned to the contractors in the road-bed does not cover any other items of that kind.

Mr. Teal: That is true; but it would eventually come out in the wash in his contract when he was finally paid off, wouldn't it?

The Witness: It would be paid for as an extra bill.

Q. That is the point,—You made it very clear—that while

the contracts may provide that these kinds of extra work shall be done by the contractor and the price fixed, they are not included in the yardage price?

A. Very often not. I am not saying that sometimes there are not part of them included. But I wanted to explain that that is one of the items of extra work which makes it necessary, when you want to cover the entire cost of the grading, to increase the price which you would pay the contractor per yard. There is another item which was not mentioned, and that is the overhaul.

Q. Just explain what that means.

A. In practically all contracts the price fixed covers the moving of the material a certain distance—possibly a thousand feet. Any material hauled over the thousand feet is paid for extra at so much per yard per hundred feet. That is what we call overhaul. And not being shown in the grading items here it is necessary to cover that by an increase in the price paid contractors per yard.

Q. Who determines whether the contractor shall haul out the material that he is taking out of a cut, beyond the free limit that the contract requires him to haul it?

A. Well, that is at the engineer's discretion.

Q. If I understand it then, where the contractor is making a cut the contract ordinarily provides that he shall haul that material a certain distance and dump it, without extra charge, is that right?

A. Yes, sir.

Q. Now if the engineer desires the contractor to haul that material and dump it at another place beyond that limit, that is called overhaul, and the railroad has got to pay the contractor a certain rate which is usually covered by contract for the extra distance the engineer wants it hauled, is that right?

A. Yes, sir; that is right.

Q. And to the extent that the engineer asks for or has asked for an overhaul, it finds its location in extra bills over and above the contractor's profit, is that right?

A. Not as an extra bill. It comes in as a part of his final estimate. There are many thousands of yards of overhaul that are paid for in that way.

Q. Well, I was inaccurate then. I simply wanted to locate where it finally falls among the class of items. It is included in the yardage price?

A. No, it is not included in the first yardage price.

Q. It could not be under those circumstances?

A. The yardage price covers the handling of the materials a certain distance, generally a thousand feet. Any handling of the material beyond that is paid for as an overhaul; the result being that after a piece of work is taken and the overhaul has been measured up it practically amounts to an increase in the price per yard for the material, sufficient to cover that overhaul, although it is paid for at so many thousands of yards hauled 100 feet over the haul limit at a certain price per yard.

Q. Now this method, as manifest in the term "overhaul"—is that a current method to-day among railroad engineers for construction work?

A. Yes, sir; it is in the Northwestern states.

Q. Turning back to the prices shown on page 9, you stated how you arrived at $82.50 for clearing, and I will ask you to state whether that price, in jour judgment, fairly represents the cost as of June 30, 1908, of doing the clearing work embraced on the Great Northern lines of 31064 acres?

A. Yes, sir; I believe it does; taking all classes of clearing into consideration.

Q. And to what extent does that rest upon your actual experience in recent years?

A. It is based on our experience in recent years.

Q. You mean what you have actually been paying for clearing work?

A. Yes, sir; it based on what we have actually been paying for clearing work.

Q. And is that true of grubbing?

A. It is.

Q. And to what extent is it true of the other prices you have shown there?

A. It is true of all of the other prices shown under the "Grading" heading.

Q. Now have you prepared another exhibit relating to the cost of grading, which you can offer in evidence, in connection with the prices you have shown here for grading?

A. I have.

(Witness produces paper which was marked "Complainants' exhibit 16 (Hogeland)").

COMPLAINANT'S EXHIBIT 16 (HOGELAND).

GREAT NORTHERN RAILWAY.

COST OF GRADING.

CONTRACT GRADING QUANTITIES AND PRICES.

Built.	Line.	Mileage.	Earth.		Hard Pan.		Loose Rock.		Solid Rock.		Total Yardage.	Ave. Cont. Price.	Total Charges.	Ave. cost per Yard.
			Cu. Yds.	Price.	Cu. Yds.	Price.	Cu. Yds.	Price.	Cu. Yds.	Price.				
1898	Cloquet to Boyleston.	126.12	3,842,846	19.4	66,201	40.0	35,700	45.0	52,423	$1.00	3,997,170	22.5	$ 1,411,645	35.3
	Deer River to Fosston.													
1899	Hibbing to Virginia	18.78	437,632	22.8	25,903	37.9	18,617	42.9	8,318	.999	490,470	25.7	191,223	39.0
1901	Brookston to Ellis	46.49	991,524	20.2	44,952	38.8	24,400	44.1	8,948	1.115	1,069,824	22.4	396,339	37.1
1902	Jennings to Boundry Line	50.98	608,850	18.7	466,559	27.7	110,921	38.2	126,578	.95	1,312,908	31.0	644,694	49.1
	Marcus to Republic	69.38	1,056,929	19.3	664,605	34.8	135,726	40.0	535,524	.943	2,392,784	41.6	1,230,323	51.4
	Kelly Lake to Nashwauk	10.64	146,397	30.9	35,746	38.0	9,135	43.0	4,456	1.15	195,784	34.7	99,983	51.1
	Boundary to Swinton	43.38	552,712	20.5	1,160,457	32.5	302,027	40.0	304,413	.938	2,319,609	38.6	1,116,366	48.1
	Laurier to Danville	16.50	327,911	21.1	189,416	35.0	53,790	40.0	75,607	1.00	646,724	36.0	287,999	44.5
1903	Souris to Westhope	16.41	237,086	14.1	3,657	35.0					240,743	14.5	73,954	30.7
	Granville to Mohall	46.97	694,357	13.3			260	35.0	125	.85	694,742	13.4	145,255	20.9
1904	Columbia Falls to Rexford	69.18	1,010,675	20.0	2,591,720	35.0	485,001	40.0	1,170,401	.893	5,257,797	44.7	3,341,970	63.6
	Thief River Falls to Greenbush.	41.09	468,598	16.4							468,598	16.4	109,854	23.4
	Mohall to Sherwood	14.85	164,057	13.1							164,057	13.1	42,361	25.8
	Edmore to Munich	24.87	348,851	16.9	19,936	41.5	69	39.3			368,856	18.2	122,262	33.2
	Swinton to Fernie	9.82	91,969	20.8	139,567	47.7	8,147	40.0	38,780	.95	278,463	45.2	168,629	60.6
	Grand Forks to Phoenix	24.63	42,895	19.6	253,173	35.0	86,359	40.0	621,524	.95	1,003,951	71.9	852,604	84.9
	Granby Smelter Line	4.74	91,907	20.6	69,128	35.0	8,941	40.0	11,427	.95	181,403	31.7	73,468	40.5
1905	Towner Line	46.13	485,193	13.6							485,193	13.6	98,905	20.4
	York Line to Thorne	34.68	454,797	13.7							454,797	13.7	96,613	21.3
	Westhope Extension	12.76	115,059	14.3							115,059	14.3	28,449	24.7
	Forbes Extension	13.36	168,240	14.4			192	37.8			168,432	14.5	42,877	25.4
	Munich Extension	20.53	234,480	15.0					100	.90	234,580	15.1	55,999	23.9
	Curlew to Midway	14.52	182,133	18.0	87,207	35.0	15,619	40.0	43,279	.90	328,238	33.0	172,167	52.5
1906	Greenbush to Warroad	44.00	351,480	18.1							351,480	18.1	71,759	20.4
	Midway to Molson	28.89	212,512	19.9	453,184	35.0	280,679	40.0	947,714	.925	1,894,089	62.8	1,389,195	73.3
	Boundary to Keremeos	18.20	150,628	19.2	139,111	35.0	68,491	40.0	56,947	.925	415,177	38.0	377,040	90.8
	Thorne to Dunseith	7.61	122,432	15.7							122,432	15.7	22,289	18.2
	Molson to Orville	27.82	244,095	20.1	661,308	35.0	139,492	40.0	274,726	.90	1,319,621	44.2	709,427	53.7
	Sioux City to Ashland	103.15	2,821,252	17.6	134,903	35.0	720	40.0	2	.80	2,956,877	18.4	718,848	24.3
1907	Kelly Lake to Fermoy	23.40	656,642	36.0	62,083	42.0	11,277	47.0	2,653	1.15	732,655	36.7	402,648	55.0
	Aneta to Devils Lake	57.72	1,364,434	16.3	1,464	35.0	12,002	40.0	9	.90	1,377,909	16.6	312,701	22.7
	Orville to Boundary	20.64	202,787	18.8	279,498	35.0	111,601	40.0	316,765	.941	910,651	52.5	557,779	61.0
	Crosby Line	89.16	1,238,996	17.1	15,006	30.6	130	35.0	827	.80	1,254,959	17.4	354,409	28.2
	Billings & Northern	194.14	5,980,299	20.7	1,509,529	35.3	1,068,164	41.5	1,404,282	.815	9,962,274	23.7	4,479,114	44.4
	Portage la Prairie Line	77.01	823,525	15.4	400	35.0					823,925	15.4	214,306	26.0
	Brandon Line	69.45	1,549,848	20.3	12,548	30.0	141,998	44.8	5,498	.826	1,709,892	22.6	578,228	33.8
	Morden Line	15.25	201,408	15.0							201,408	15.0	35,797	17.8
	Totals	1,553.20	28,675,436	19.3	9,087,261	34.6	3,129,458	40.7	6,011,326	.95	46,903,481	33.4	$21,027,679	44.8

TOTAL CONTRACT QUANTITIES ON ALL ABOVE LINES.

	Cu. Yds.	Cost.	Average per yd.
Earth	28,675,436	$ 5,542,917.03	19.3
Hard Pan	9,087,261	3,150,621.83	34.6
Loose Rock	3,129,438	1,276,484.00	40.7
Solid Rock	6,011,326	5,711,599.41	95.0
Total	46,903,481	$15,681,622.27	33.4

NOTE.—The Column "Total Charges" shows all charges against "Grading" for each of these Lines, from the Construction Books.

Chief Engineer's Office.
April 12th, 1909.

Mr. Holden: We offer in evidence "complainants' Exhibit 16 (Hogeland)".

Q. Will you just state what Hogeland Exhibit 16, is, Mr. Hogeland; what it covers?

A. It represents the cost of grading on various lines built by the Great Northern Railway, from 1898 to 1908, inclusive, aggregating 1553.20 miles.

Q. Where was this construction?

A. This construction was on various parts of the system, in Minnesota, North Dakota, Montana, Washington, Manitoba and British Columbia.

Q. Now, proceed, Mr. Hogeland, and state just what is shown on that exhibit, and what bearing it has upon your prices shown on your exhibit No. 15, for grading work.

A. The first column shows the year in which each line was built. The second column shows the name of the line. The third column shows the mileage. The fourth column shown the cubic yards of earth. The fifth column shows the price paid contractors for such earth. The sixth column shows the cubic yards of hard pan. The seventh column shows the price paid contractors for such hard pan. The eighth column shows the cubic yards of loose rock. The ninth column shows the price paid contractors for such loose rock. The tenth column shows the cubic yards of solid rock. The eleventh column shows the price paid contractors for such solid rock. The twelfth column shows the total yardage. The thirteenth column shows the average price paid contractors for all material. The fourteenth column shows the total charges against grading from the construction books, for each of these lines. The fifteenth column shows the average cost per yard, which is arrived at by dividing the total charges from the construction books by the total yardage.

Q. Now to what extent are these figures actual figures taken from your records?

A. They are taken from our records.

Q. Wholly so, are they not?

A. Yes, sir.

Q. Now you show that you paid an average of 19.3 cents to contractors for earth work. That is an actual payment made to the contractors for the work shown actually on this exhibit?

A. Yes, sir; those are the actual average prices paid contractors for that amount of earth work.

Q. I wish you would proceed and analyze the bearing of those prices upon the prices you have shown on page 9 of your exhibit No. 15, where you have shown your prices for earth, hard pan, and so on.

A. The summary at the bottom of each column gives the totals. I have also made a summary at the foot of the sheet showing the total contract quantities on all of the above lines. At the foot of column 13 is shown 33.4 cents as the average contract price for all material. At the foot of column 15 is shown 44.8 cents as the average cost per yard of all material. The difference between these two—11.4—shows approximately what should be added to contract prices to cover the entire cost of the grading. By adding that to the average contract prices it brings the earth prices to 30.7 cents per yard; hard pan to 46 cents; loose rock to 52.1 cents; solid rock to $1.06 4/10. The prices as used on page 9 of Exhibit 15 for earth, hard pan, loose rock and solid rock, were applied before this exhibit 16 had been prepared. The comparison will show that it practically justifies the prices which have been used.

Q. In other words, in your Exhibit 15 on page 9, you estimated for earth work, on your judgment, that 31 cents was a fair price, including all that it cost chargeable to earth work per yard?

A. Yes, sir.

Q. And after you had made up this table of grading prices, on page 9, this exhibit 16 was worked out of the actual records for the actual construction from 1898 to and including 1907, and adding the addition between average contract price and the average cost per yard to the actual price of 19.3 cents paid contractors, you found what figure?

A. 30.7 cents as against my 31 cents.

Q. And the same method of computation, for the purposes of comparison bears on each of the other items of hard pan, loose rock and solid rock?

A. Yes, sir. I desire to say that so far as earth is concerned, my judgment is that the proportion of the cheaper lines in this exhibit 16 is much greater than should be applied to the entire system, resulting in a lower price, as paid contractors (19.3 cents) than would be fair to apply to the entire system. In other words, if you glance down column 5 you will notice many lines where the grading, as paid contractors for earth is down to about 13 cents a yard. There

are quite a number of those lines in North Dakota, built within the past ten years, which, in my opinion, bring the average of the earth work, as shown at 19.3 cents, lower than it should be to cover the entire system.

Mr. Teal: I notice only three charges in there at 13 cents, on the entire line.

Mr. Holden: Well, some at 14.

The Witness: That is the principle that I have in mind. I simply wanted to illustrate it.

Q. When you say 13 you have reference—

A. Well, down in that neighborhood—13 and 14 cents.

Q. About 13 and 14; in that general class of charges?

A. Yes. And it is fair to say this, too: that this covers grading going back for a period of ten years, when grading prices were somewhat lower than they are at the present time, or in 1908. And I think therefore that 19.3 cents is a lower average price than the earthwork on the system could be let for to contractors, and the railway company to pay the freight charges and the overhauling and extra bills.

Q. At the present time?

A. At the present time.

Q. Or rather, more accurately, as of June 30, 1908. Now, what have you to say as to comparison between the hard pan price and the price you show on page 9.

A. The average price paid contractors for hard pan is 34.6 cents. Adding to that the 11.4 cents as the increased cost, it brings it up to 46 cents, and I have used a price of 45 cents. For loose rock the same method brings a price of 52.1 cents, and I have used 55 cents. For solid rock the same method brings a price of $1.06-4/10, and I have used $1.10. So far as the loose and solid rock is concerned, I consider that we are justified in using a somewhat higher price on account of so much of this work being carried out a number of years ago when labor was considerably lower, and, furthermore, to the fact that a considerable portion of our rock work is in Minneapolis, Spokane, where the cost would be considerably greater to carry it out than it would be out in the open where blasting could be resorted to without any hindrance. I feel, therefore, that the price I have used for loose rock and solid rock is justified even on the showing on this Exhibit No. 16.

Q. What would you say as to your price of $2.00 for rip rap?

A. That I think is a reasonable price and is justified by what the work actually costs us.

Q. At the present time, and within the last year or so?

A. Yes, sir.

Q. And is that true of $9.00 for retaining walls and $3.50 for slope walls?

A. It is.

Q. You have used your current experience in paying for that class of work in making up that figure there?

A. Yes, sir.

Q. And how about the price of $765,000 paid for crib work?

A. That is based on the amount that exists and the cost of reproducing it and is not on a lineal foot basis, because crib-work varies so in height and extent, you have to put in a lump sum to cover it.

Q. Taking the total there of $95,878,362, what have you to say, in your judgment, regarding that figure?

A. I think that represents very fairly the cost of reproducing the class of work that is covered by that.

Q. Now your next item covers tunnels. You have different kinds of tunnels on the system, as shown at the foot of page 9 of the table, and I wish you would state just how you arrived at the number of feet.

A. The number of feet is arrived at from actual records of the length of each tunnel.

Q. And the prices.

A. The prices are arrived at based on the cost of carrying out that class of work in 1908, and shown as for unlined single track tunnel at $70 per foot, and that covers the excavation of the tunnel proper, the enlargement of the section required to put in the timber, the timber, and the placing of it, and the transportation of men, tools, powder and material. My remarks in reference to that applied to timber lined tunnel. The unlined tunnel has no timber in. I got ahead of my story a little on that. The concrete lined tunnels shown as the Boulder Tunnel, which is between Helena and Butte, and the Cascade Tunnel, through the Cascade Mountains, which have a separate price—the first of $175 a foot and the second of $195—are based on 1908 prices for tunnel excavation, concrete lining, transportation of men, tools, machinery and materials.

Q. And the last item.

A. The last item is a double track tunnel at Seattle, owned jointly by the Northern Pacific and the Great Northern, and is based on the actual cost of the tunnel having been built in very recent times.

Q. What have you to say as to the total figure of $7,656,-030?

A. That represents, as fairly as I think it is practicable to do it, the cost of reproduction of tunnels on the system, as they existed at that date.

Q. And that the current price is as of that time?

A. Yes, sir.

(A recess was here taken until 2:00 o'clock P. M.)

Afternoon Session.

W. L. DARLING, recalled for further cross-examination, testified as follows:

By Mr. Teal:

Q. There were just one or two things that I wanted to know about, Mr. Darling. In connection with this exhibit that was prepared under your direction and filed this morning, showing the estimated cost of certain pieces of road and the actual cost: Those are nearly all double track roads, aren't they?

A. It is shown there exactly what they are.

Q. What does that mean, where it says "Main track," "Second track," and "Second track work?"

A. Main track is new track; second track is new work; second track work is in connection with raising grades on second track. It is old second track work, and has been revised.

Q. Then in work of that character, that is of course very much more expensive than a single main track, isn't it?

A. Yes, sir.

Q. On these roads where it says, "Valley City change of line, main track and second track," and "Lake Park to Glyndon" and the "White Pine Hill Grade Revision," was that extra heavy work or not?

A. Yes, sir; it was. Heavy work.

Q. You wouldn't call that an average of the system?

A. No, sir; I wouldn't. That is not an average of the system of the main line proper.

Q. That is what I mean.

A. Though it is side tracks, yard and facilities.

Q. In your original approximate estimate here, and in this actual cost, those are based upon estimates that you made and submitted?

A. Yes, sir.

Q. And those are the actual items here?

A. Yes, sir.

Q. And you have the actual items paid, haven't you?
A. Yes, sir.
Q. And your actual estimates?
A. Yes, sir.
Q. I would like to have you furnish what totals make those.
A. You mean the details of those totals.
Q. Yes. In other words, when I was asking for this, I wanted to ascertain what you did pay for rock work.
A. Yes, we have all those.
Q. That is what I supposed. And that can be furnished without any difficulty, can it not?
A. Yes.
Q. I would like to have that. And the same with reference to your estimate. I want to see what you estimate earth work and rock work and loose rock, and what you let the contract for, and what these items make.
A. Yes, sir.
Mr. Donnelly: Let us understand that. You want, as to each of those items, a complete, detailed statement of his original estimate, and a complete detailed statement of the amounts, actually paid?
Mr. Teal: Yes, sir.
Mr. Donnelly: As to each of these pieces of property.
Mr. Teal: Yes, if you please.
Mr. Donnelly: You say that can be readily obtained?
The Witness: Well, of course it takes some little time. We have all the information, though. It may take two or three days to get it up.
Mr. Teal: Well, that will be satisfactory. It can be sent to us.
Mr. Donnelly: Well, we can put it in when we start taking your testimonly.
Mr. Teal: We would like to have it before then. Then we would save time. That was the reason.
Mr. Donnelly: All right.
Mr. Teal: He can send one to Mr. Walter and one to me.
Q. Now in this estimate of Floating Equipment, I notice you have itemized it here: "Transfer Steamer Tacoma," "Auxiliary Barge" and "Ferry inclines at Kalama & Goble" at $612,400.
A. Yes, sir.
Q. That is the same item that you used in the exhibit on Floating Equipment, isn't it?

A. Yes, sir; I think it is. I don't remember just how that was carried in that Spokane rate case, but I think it was.

Q. Well, it was carried as Floating Equipment.

A. Of course it includes any work done since that.

Q. Now just simply to get at this right: This is the cost of reproducing, as of April, 1909?

A. Yes, sir.

Q. Now, in April, 1909 (that is of this year) the bridge across the Columbia River from Vancouver was about completed, wasn't it, substantially?

A. Yes, sir; practically.

Q. And the bridge across the Williamette River at Portland was about completed?

A. Practically; yes, sir.

Q. And that did away with this transfer work at Kalama by Steamer Tacoma?

A. No, sir; I don't think so.

Q. But that is the purpose of the bridge at Vancouver and the bridge at Portland, isn't it?

A. No, sir.

Q. You think, then, that the steamer at Tacoma and those barges would be continued to be used after you get the bridge?

A. I could not say as to that. I could not give you any satisfactory answer.

Q. So all this statement of yours that has been prepared covers all items of a like character of any material or equipment or anything of the kind that is on hand, is to-day, on the Northern Pacific?

A. At the transfer?

Q. No, I say that that would substantially represent the way in which the estimates prepared, everything that is on hand to-day, in connection with the Northern Pacific, is being valued at its actual value to-day?

Mr. Donnelly: Everything that is in use.

The Witness: Everything that is in use, yes.

Q. And the fact that the Steamer Tacoma was built 20 or 25 years ago—no allowance is made for that, of course?

A. No, sir; none whatever; no allowance for depreciation.

Q. There was one other thing I wanted to ask you about: In your Spokane exhibit I notice that you made an allowance of 4 cents per ton per mile for hauling rails. You didn't mean 4 cents, did you?

A. Four mills per ton per mile.

Mr. Holden: Mills.

Mr. Teal: That is what I say.

Mr. Holden: You said cents.

Mr. Teal: I know it. That is just what I was correcting. That does read 4 cents per ton per mile, doesn't it?

The Witness: No, sir.

Q. What does it read?

A. It reads 4/10 of a cent per ton per mile.

Q. I read it wrong. What you mean is four mills?

A. Yes, sir.

Q. And that was the estimate you used as the cost of the movement of rails at that time?

A. Yes, sir.

Q. Just one question about this Floating Equipment: The rolling stock is figured on the basis as though it were entirely new rolling stock?

A. Yes, sir.

Q. Now in the Spokane case you put in a number of detailed exhibits in addition to this, did you not?

A. Yes, sir.

Mr. Teal: I suppose copies of those can go in, so as to save you the trouble of copying them in.

Mr. Donnelly: Yes.

The Witness: I guess I didn't understand you. Do you mean the Spokane estimate that I just gave you?

Mr. Teal: No, no. I said, "In the Spokane case, in addition to this statement."

The Witness: What is that statement?

Mr. Donnelly: That is the copy of the statement.

Q. You put in a number of details that went with this statement.

A. Possibly. I am not sure.

Mr. Donnelly: I don't think there was anything beside that that went in with Mr. Darling.

Q. Didn't you make us a statement showing the cost of one mile of main track?

A. Yes, sir.

Q. And the cost of one mile of branch lines?

A. Yes, sir.

Q. And the cost per cubic yard for grading?

A. Yes, sir.

Q. The cost of tunneling, bridging, et cetera?

A. Yes, sir.

Q. And at the time those were made, those represented your ideas, as accurately as possible, of the cost of building the line?

A. Of those specific items.

Q. Yes.

A. If you will read that estimate carefully you will see that I have used that cost of the branch line of road to cover the cost of ties, rails and ballasting. It had nothing to do with grading, bridging or the facilities.

Q. Whatever they purport to represent, represented your honest idea at the time?

A. Except the depreciation and the traffic charges.

Q. But when you put in the cost of building a mile of track you did not put in depreciation?

A. No, not depreciation, but traffic charges were in there.

Q. Well, can I put it this way, then: Will this cost of one mile of main track—or did that cost of one mile of main track, at the time you prepared it, represent honestly your idea of the cost of building, in 1907, a mile of main track of the Northern Pacific Railway?

A. Yes, sir; except for the tariff rates.

Q. Except for what tariff rates?

A. Tariff rates for hauling material.

Q. With that exception, that represented your honest conviction as the cost of building a mile of main track of the Northern Pacific at that date, and of the branch lines?

A. Yes, sir; what is called one mile of main track.

Q. Yes. And that purports to represent your honest conviction?

A. Yes, sir.

Mr. Teal: That is what I want to know. We can introduce that afterwards without bothering you to recopy it. That will be all.

By Mr. Donnelly:

Q. Let me understand in regard to this statement showing the approximate estimates and the actual cost of various pieces of railroad. Were those all double tracks?

A. This was a double track (indicating).

Q. That is, Lake Park to Glyndon?

A. Yes, sir. This "Valley City Change of Line" was a single track, with the exception of a mile and 4/10 of second track which we built in connection with it. "Livingston to Muir" was double track. "St. Regis to Paradise" was a single track. "White Pine Hill" was a single track. "Garrison to Missoula" was a double track. The "Mandan South" estimate was on a single track.

By Mr. Walter:

Q. Did this include station buildings?

A. What?
Q. This estimate.
Mr. Donnelly: Those various pieces of track.
A. No, no equipment then.
By Mr. Teal:
Q. Does it include station buildings?
A. Yes, sir.
Q. That is the reason I wanted the itemized statement showing what it is.
A. Everything that is necessary. Now, for instance, take the line from Lake Park to Glyndon: There would be no station on that, because they were on our own line. "Garrison to Missoula" was practically on our own line. There would be very few station buildings there, and none except what we could have carried from one place to another.
Q. Your detailed statement showed all that?
A. The detailed statement showed the whole thing.
Q. That is the reason I did not want to examine you about each item, because it will show the whole thing.
By Mr. Walter:
Q. In the most of this, Mr. Darling—for instance, Lake Park to Glyndon, and White Pine Hill Grade, it was work which while very expensive was made to lessen cost of operation?
A. Yes, sir; and for increasing the capacity of the railroad.
Q. Yes, where you already had a railroad. But this work at this expense you could cut down grades and make a much better road for handling business?
A. Well it was done primarily for increasing the capacity to get a railroad to handle the business on, and incidentally to decrease the value of the operation.
Q. But it was very expensive work—far more than the average?
A. Well, it is heavy work; yes, sir.
Mr. Teal: It will be understood that when this comes in it will be marked as a Defendant's Exhibit by the stenographer.
Mr. Walter: And as to all papers that Mr. Darling has, he can keep them just as they are, without returning them to their respective divisions, so they will be accessible to our representatives.
Mr. Donnelly: Whatever information there has been covered by you, Mr. Darling, in the preparation of these statements, just keep it where it is, so, in case the representatives of the defendant so wish they can look it over.

Mr. Darling: We have it in our office complete. It will stay there.

Mr. Walter: All right; that is what I want.

ALBERT H. HOGELAND, resumed, and his direct examination continued as follows:

By Mr. Holden:

Mr. Hogeland, the next item on Exhibit 15 is "Bridges, trestles and culverts." The first bridge is the stone arch bridge in Minneapolis, and the items following that are divided between steel and wooden bridges and permanent and timber culverts. How are the lineal feet shown in those different items arrived at?

A. They are made up from our records.

Q. Actual number of feet showing what?

A. Showing what actually exists.

Q. How do you arrive at the price of $857,000 for the stone arch bridge in Minneapolis?

A. That is made up from a detailed estimate of the excavation, coffer-dam work, masonry, and in fact all of the items of work that enter into the structure.

Q. At what prices?

A. At prices prevailing in 1908.

Q. Now, your prices for steel bridges with masonry: Will you state how the prices were made up for that item?

A. Those were made up as of 1908 prices.

Q. Well, what was the base price per ton for steel?

A. $60 per ton at St. Paul, to which was added 60 cents for mill and shop inspection; $12.50 per ton for erection; $1.50 per ton for painting; $5.40 per ton for work train service, use of equipment, transportation charges, &c., making a total of $80.00 per ton. That was the unit price used for ordinary plate girder spans. For truss spans an additional charge of $10 per ton was made, based on $5.00 additional for the steel laid down at St. Paul, $2 additional for erection, and $3 additional for false work, making a total of $90.00 per ton for truss spans erected.

Q. To what extent are those different cost figures based on the actual experience of the railroad company during the year 1908?

A. They are based on our actual experience during that and preceding years, when the conditions are practically the same.

Q. Now, as to the masonry prices: What figure do you place per cubic yard for first-class masonry?

A. We used $10.50 per cubic yard for first-class masonry, and $7.00 per yard for second class masonry.

Q. Do you figure a price per yard for concrete?

A. Yes, sir; figure that at $7.00 per yard.

Q. How do you arrive at those figures?

A. Those are based on our actual experience during the year 1908 as well as preceding years.

Q. Under similar conditions?

A. Similar conditions; yes, sir.

Q. And by "actual experience" you mean actual prices paid during that period for that kind of work?

A. Yes, sir.

Q. And were those prices paid in the ordinary course of railroad construction?

A. Yes, sir; they were.

Q. Now, does what you have said about the prices apply to wooden bridges and permanent culverts and timber culverts?

A. Yes, sir; we applied the prices prevailing in 1908.

Q. And the numbers of permanent and timber culverts, and the quantities, how were they arrived at?

A. They are from our records of what actually exist.

Q. Now, passing to the subject of ties: You have divided ties into three classes—ordinary track ties, switch ties and crossing ties. Explain the way in which you arrived at the number of track ties.

A. The number of track ties are taken at 3000 per mile for main tracks and 2640 per mile for side tracks, and from that is deducted the number of ties which would be used as switch ties at switches and bridge ties on bridges—the switch ties and bridge ties being considered as a separate proposition. This results in a total of 23,583,120 cross ties.

Q. Was the figure of 3000 ties per mile an estimate, or to what extent was it based on actual count?

A. That was made from count at various places, various divisions, so as to get an average per mile for different parts of the road.

Q. And is that true of the lower figure you spoke of for side tracks and branch lines?

A. Yes, sir; as a rule; and also from our standards as to the way side track ties are spaced.

Q. Now, of switch ties you have shown 9724 sets. Is that actual quantity?

A. Yes, sir; that is actual quantity, taken from our records.

Q. Is the same true of crossing ties?

A. Yes, sir.

Q. Will you state your basis of price for track ties?

A. We used the price of 82 cents. That represents an average of what we figure the ties would cost to replace at that time—1908.

Q. Does that figure cover all the charges? Just state what that price includes in addition to the original cost of the tie delivered on the right of way?

A. Well, to the price of the tie delivered on the right of way would be added the pealing, if such was necessary, any handling, and any transportation charges to deliver the tie to the point of work.

Q. And how about freight charges on ties that are brought from points off your line?

A. The freight charges on ties are figured at tariff rate.

Q. That is included in the 82 cents?

A. That is included in the 82 cents. I would say that we have a statement to be presented as an exhibit, showing what ties have cost us on various lines for a few years past.

Q. I had forgotten about that.

(Paper produced by witness.)

Mr. Holden: We offer in evidence, and ask that it be marked "Complainants' Exhibit 17 (Hogeland)" a statement entitled "Great Northern Railway—Cost of Track ties."

(Said paper was so marked.)

COMPLAINANT'S EXHIBIT 17 (HOGELAND).

GREAT NORTHERN RAILWAY.
COST OF TRACK TIES.
MILEAGE.

Built	Line	Main	Side	Number	Charges	Cost per Tie
1898	Cloquet to Boyleston	126.12	9.03	356,800	$242,714	68.0
	Deer River to Fosston					
1899	Hibbing to Virginia	18.78	3.98	60,090	28,009	46.6
1901	Brookston to Ellis	46.49	3.49	132,060	59,344	45.0
1902	Jennings to Boundary	50.98	6.08	150,480	49,589	32.9
	Marcus to Republic	69.38	6.40	200,100	74,868	37.4
	Kelly Lake to Nashwauk	10.64	.65	29,830	11,206	37.6
	Boundary to Swinton	43.38	6.28	131,100	60,686	46.3
	Laurier to Danville	16.50	2.58	50,160	18,057	36.0
1903	Souris to Westhope	16.41	1.33	46,830	44,473	95.0
	Granville to Mohall	46.97	2.99	132,000	119,045	90.2
1904	Columbia Falls to Rexford	69.18	10.41	210,140	114,627	54.6
	Thief River Falls to Greenbush	41.09	2.61	115,370	72,835	63.1
	Mohall to Sherwood	14.85	1.98	44,430	36,904	83.1
	Edmore to Munich	24.87	1.96	70,830	52,335	73.9
	Swinton to Fernie	9.82	1.48	29,830	18,489	62.0
	Grand Forks to Phoenix	29.37	7.50	97,340	38,536	39.6
1905	Towner Line	46.13	3.58	131,230	97,576	74.4
	York Line	34.68	2.44	98,000	66,597	68.0
	Westhope Extension	12.76	1.40	37,380	29,551	79.0
	Forbes Extension	13.36	1.56	39,390	30,030	76.3
	Munich Extension	20.53	2.62	61,120	45,078	73.8
	St. Johns Extension	3.88	.....	10,300	8,134	79.0
	Curlew to Midway	14.52	1.49	42,240	25,427	60.2
1906	Midway to Molson	28.89	3.20	84,740	38,695	45.7
	Boundary to Keremeos	18.20	2.27	54,120	28,899	53.4
	Thorne to Dunseith	7.61	.35	21,010	23,892	1.137
	Molson to Oroville	27.82	7.99	99,460	49,842	50.1
	Sioux City to Ashland	103.15	18.08	320,050	260,275	81.3
1907	Kelly Lake to Fermoy	23.40	2.98	74,300	48,175	64.9
	Aneta to Devils Lake	57.72	9.18	176,600	149,905	84.9
	Oroville to Boundary	20.64	1.09	57,370	30,422	53.0
	Crosby Line	89.16	6.51	252,570	217,817	86.2
	Portage la Prairie Line	77.01	6.57	220,650	171,190	77.6
	Brandon Line	69.45	7.22	202,410	179,612	88.7
	Morden Line	15.25	2.33	46,410	47,185	1.017
	1898–1907	1,318.99	149.61	3,886,680	$2,590,019	66.6
	1905–1907	684.26	80.86	2,029,350	$1,548,302	76.3
	1907	352.63	35.88	1,030,310	$ 844,306	82.0

Chief Engineer's Office, April 15th, 1909.

Q. Now, Mr. Hogeland, will you just explain what this exhibit shows?

A. It shows the cost of track ties bought for new lines, from 1898 to 1907, inclusive, covering a total of 1318.99 miles—

Q. Of main track?

A. Of main track—and 149.61 miles of side track. It covers the total number of ties of 3,886,680; the total charges for these ties being $2,590,019, or an average cost per tie of 66.6 cents. I have also separated it, showing the lines built during 1905 and 1907—that would cover three years—covering a mileage of main track of 684.26, side track 80.86, 2,029,350 ties, total charges $1,548,303, or an average cost per tie of 76.3 cents. Taking the year 1907 alone, during which was constructed 352.63 miles of main track and 35.88 miles of side track, the total number of ties used being 1,030,310, total charges $844,306, which gives an average cost per tie of 82 cents.

Q. What was your purpose in showing first the average price from 1898 to 1907, and then the average price from 1905 to 1907, and finally the price for 1907?

A. It was made to show that the price of ties has been gradually increasing, and while the average price for that ten year period has been 66.6, for the last year, 1907, it has been 82 cents.

Mr. Teal: The purpose of this is to show that the price of ties has been increasing? Is that the only purpose of this?

The Witness: That was one purpose, and I think is an answer to Mr. Holden's question whan he asked me why I separated it into those different items—those different periods. The purpose of the entire statement is to show what ties have cost us.

Mr. Teal: On the whole system?

The Witness: On the whole system; yes, sir.

Mr. Teal: And this statement purports to show that?

The Witness: Yes, sir.

Mr. Teal: And is fairly illustrative.

The Witness: I think so, yes, sir. I should add to Mr. Teal's question, I think, that it covers the lines built during that time.

Mr. Teal: That don't answer the question I asked you. It depends very much upon whether it shows the average cost of your ties. I was looking at this and I see it is all in the east. Is there any Washington work in there that amount to anything?

The Witness: Yes, sir.

Mr. Teal: How much of late years?

The Witness: Well, there is—

Mr. Teal: Where is your Washington work and Idaho work?

The Witness: Well, I was going to give you the Washington work.

Mr. Teal: I would like to have that given, so we will see how much is east and how much is west.

The Witness: Curlew to Midway is one item. Molson to Oroville 27.82. Oroville to Boundary, 20.64 miles. Those, I think, are the only Washington lines.

Mr. Teal: All those are under sixty cents—60.2. I beg your pardon. I just wanted to know if you considered that—

Mr. Holden: Well, I was just going to ask you some questions in relation to the location of those different items of work. Are there some other lines constructed west of Minnesota?

A. Oh, yes; a number of lines in North Dakota, Montana, British Columbia, as well as some in Washington.

Q. And among those lines that you were giving in answer to Mr. Teal's question are lines just immediately north of the international boundary, in Canada, are there not?

A. Yes, sir.

Mr. Walter: Will you point those out?

Mr. Teal: They show for themselves right in the figures. I can pick them out from the figures. I will pick them out later. I see the cost per tie.

Q. Referring to the cost for 1907, of 82 cents, it is already in this record, and was referred to in the testimony taken in Chicago on Friday and Saturday, that there was a recline in prices in the latter part of 1907—a decline in prices of lumber generally, which I take it would include all kinds of lumber, although I am not specifically informed right now as to whether the same decline came in ties as did in other forms of lumber—

Mr. Teal: Mr. Darling so testified.

Mr. Holden: I think that is a fact.

Q. Were the prices paid for ties in 1907 affected by that decline or not?

A. They were not, I think, the ties shown in this statement.

Q. Why not?

A. I think they were all purchased earlier in the year. If there was any decline then, in the latter part of the year I do not think it would show in this statement.

Mr. Teal: Pardon me, Mr. Hogeland. You said you were

making up this statement as of July 1, 1908. Why wasn't the tie price shown before that date?

The Witness: That, I think, will be brought out in the testimony.

Mr. Donnelly: Mr. Teal, he made the original statement. The detailed estimate, he said, was made out as of July 1, 1908. This is a statement of prices actually paid.

Mr. Teal: Yes. I won't interrupt any further.

Q. Is it a fact, or not, that in work of this kind, such as would be shown in the construction during the year 1907, that the early part of the year would see the contracts let and the prices agreed upon and contracted for, so that a break or change in prices later in the year would come after those arrangements had all been made?

A. Yes, sir; that is the practical working out of the thing.

Q. Turn to your exhibit 15. How do you arrive at your prices for switch ties? Is that $82.00 per set?

A. Yes, sir; $82 per set. That is made up, based on the average number of feet, board measure, in each set, to which is added handling and transportation charges; the average price per set being $60 for the lumber, $4.00 per set for handling, and $18 per set for transportation charges, making a total of $82 per set.

Q. And is that substantially true as to crossing ties?

A. Yes, sir; that is made on the same basis.

Q. Now passing to the item of rails: How do you arrive at the number of tons in main and side track rails?

A. The tonnage is computed from the mileage of the different parts of the system and the weight of the rail, in each piece or part of line, and main track and side track, so as to arrive at the actual tonnage as it existed at that date.

Q. Your records show the different weight of rails in the different parts of the line?

A. Yes, sir.

Q. And, so far as the number of tons is concerned, this is a matter of actual computation as a matter of record?

A. A matter of calculation, yes, sir.

Q. And the price, Mr. Hogeland?

A. The price is taken at $39.75 per ton, and that is based on an average price of $30.47 at St. Paul, or the head of the Lakes, 28 cents per ton for inspection and handling, and $9 per ton freight charges, making a total of $39.75 per ton.

Q. What is the price at St. Paul or the head of the Lakes?

A. $30.47 per ton.

Q. That is based, is it not, upon the price of the rails at Chicago, plus the freight to St. Paul?

A. Not necessarily at Chicago. It is wherever the rails would be purchased; and it is based on our purchases of rails during the year 1908.

Q. How many tons?

A. 60,000 tons.

Q. And that was the actual average price per ton paid during 1908 for that quantity?

A. Yes, sir, as laid down at either the head of the lakes or St. Paul.

Q. Now, to that actual average price you have added 28 cents for inspection and handling?

A. Yes, sir.

Q. What does that mean?

A. It means the inspection of the rails at the mill as well as when the rail is received at either St. Paul or the head of the lakes, and the handling from dock to cars, or transferring from car to car previous to the rail being shipped west.

Q. Is that a proper and reasonable charge?

A. It is, I think.

Q. That makes a total of $30.75 spent on the rails up to the time they are ready to be shipped out on the line from St. Paul to the head of the lakes?

A. Yes, sir; on the cars ready to be shipped west.

Q. Now in the purchase of your 60,000 tons of rails during 1908, did you encounter such a price as 28 cents per ton for inspection and handling? Is that based upon your actual experience?

A. It is based on experience extending over a period of years; yes, sir. 28 cents per ton is a reasonable allowance for that.

Q. What was the item for freight charges?

A. $9 per ton.

Q. Will you explain how you arrived at that?

A. We would carry the rail out to a point in Western North Dakota, which would constitute about the center of haul or center of gravity, if you might call it such, of the system.

Q. That would be an average haul?

A. It would represent an average haul for all of the rail.

Q. And the rate is figured at the tariff rate?

A. Yes, sir.

Q. Have you got the actual mileage?

Mr. Teal: What is the mileage you figure in arriving at $9.00?

The Witness: I didn't take it on that basis. We took it to a point that figured about the center of gravity of the system, and that brought it somewhere in the Western part of North Dakota,—I think a little west of Minot.

Mr. Teal: Can you give any idea of the mileage?

The Witness: Yes, I think that would be a point about 650 miles from St. Paul, something like that.

Q. I wish you would explain your conception of the idea of the reason for applying tariff rates on an item of that kind?

A. I think it is necessary to apply tariff rates, because in the reproduction of the Great Northern System the materials would be hauled pretty largely by other companies. That would be one reason. A further reason would be that where the material is hauled over your own line it would necessarily be done before the railroad is completed, and the transportation conditions would be poor. Your railroad would be largely skeleton track; your train loads would necessarily have to be small, and generally your haul would be empty in one direction—your trains would be empty in one direction. I therefore consider that the tariff rate, so far as a railroad under construction is concerned, would represent very closely the cost of doing the work.

Q. You mean the actual cost of movement, regardless of any return for the use of the property?

A. That is my idea; yes, sir.

Q. Now, in the matter of transporting material to the front, over what you call a skeleton track: Why is that more expensive than moving material over a finished railroad?

A. The movement is necessarily slow, and your train load is necessarily light. The power has to be lighter than you would use if your railroad was fully completed, and all the conditions tend to make the cost of transportation higher.

Q. Now, with your half completed road, what have you to say as to the different facilities along such a line in the way of water tanks and repair shops and places for furnishing supplies for the movement of trains, or the repair? What condition are those things in?

A. Necessarily those facilties would be very incomplete.

Q. Does a condition of that kind add to the expense of moving freight or trains and engines over such a line?

A. It does.

Q. If I understand it, then, if a tariff rate is presumed to be a reasonable rate on a fully matured and completed line, with a volume of traffic moving over it, your idea is that it is not an unfair basis to figure the cost of moving material to the front over a half finished skeleton line such as you refer to?

A. No: I consider it as fair a measure as can probably be arrived at.

Q. Now, you say a large amount of such material as rails would move to the front over other lines. What do you know as an actual fact about that in the building of lines? Is that an established method of doing such a thing among railroad men?

A. Yes, it is. That is illustrated by the recent building of the Chicago, Milwaukee & St. Paul. A very large portion of their material, especiadlly rails, was transported over other roads. It is true of the original construction of some portions of the Great Northern—the material was taken out over other roads. A reason for doing that would be to hasten the completion, which could be done more rapidly, the work could be carried out more rapidly by working at a number of points, rather than to push out always from one end.

Q. The next item is Frogs and Switches. You show a certain number of sets, itemizing and naming the different articles embraced in a set, and the average price, including freight charges, of $95. How was that arrived at?

A. That is arrived at by taking the details of ordinary turnouts and adding the price of the different parts, consisting of frogs, switch points, guide rails, switch stand and so forth, and to that adding freight charges at the tariff rate, producing an average price of $95 per set.

Q. That is also true of crossing frogs?

A. Yes, sir; that is true of crossing frogs.

Q. Those are steel and iron items, are they not?

A. Yes, sir.

Q. And how is your price for those arrived at?

A. That is based on the prices prevailing in 1908.

Q. You mean prices that your company actually paid during that period for items of this kind?

A. Yes, sir.

Q. Is that also true of "track fastenings and other material"—the next item?

A. Yes, sir; that is true of "Track fastenings and other material."

Q. How are the quantities there shown?

A. The angle bars, bolts and nuts, are taken from our records, as to the kind of such articles that go with the different weights of rails and are figured on the average length of rail. The spikes are based on the number of ties. Tie plates are taken from an actual record of what has been put in the system, the track not being always fully tie-plated. And the same is true of rail-braces.

Q. And your prices?

A. The prices are based on the prices paid for the same class of material during 1908, to which is added transportation charges.

Q. "Ballast" is the next item, and you have divided the mileage of the system into three divisions—3591 miles having a full ballast lift of 3000 cubic yards to the mile; 1942 miles of main track having a partial ballast lift of 2250 cubic yards to the mile; and 1421 miles of side track having a partial ballast lift of 1500 cubic yards to the mile. Now how do you arrive at that division of the mileage?

A. That is made from our records of the way the track is ballasted, as of that date, together with information furnished by our resident engineers as to the condition of ballast in different parts of the system.

Q. Well, to what extent? Then you say that the total there of 17,274,000 cubic yards is substantially accurate, as showing the actual ballast condition of the system?

A. My opinion is that it represents, as closely as we can represent, the conditions as to the amount of ballast under the tracks, as it exists, as it is possible to arrive at. I desire to say that there has been more ballast than that placed in the railroad, but that a portion of gravel which is put into the roadbed after a course of time settles into the roadbed and can hardly be called ballast. So that if we should take our records as to the amount of ballast which has been hauled out and placed in track from time to time it would make a considerably larger item than this.

Q. You mean what actual records you have of actual ballast that has been moved would be more than that?

A. Yes, sir.

But this quantity only covers that which, to-day, may properly be termed ballast, and excludes all ballast that has gone down below what would now be called ballast?

A. It is made up with that in view. It is a difficult thing

to arrive at, just where the separation would be; but it represents, as nearly as we can come at it, what should properly be called ballast today- in the railroad.

Q. And your price is shown at 62 cents a cubic yard?

A. Yes, sir; that is based on my judgment as to what it would cost to reproduce that ballast in place, as it exists.

Q. That price includes the different charges?

A. It includes the cost of loading, unloading, putting under track, and dressing, maintenance and repairs of steam shovels, train service hauling, repairs of equipment, transportation of men, tools and supplies.

Q. There is no charge for rent of equipment here?

A. No, sir.

Q. After you made this estimate on ballast, did you make an examination of your recent records, to determine what the average price that the Company had actually paid during recent years for ballasting was?

A. Yes, sir; we did.

(Paper marked "Complainants' Exhibit 18 (Hogeland)").

ACTUAL COST OF B

Date	Line	Mile-age	Cu. Yds. Ballast	Train S
				Charges
1901	Brookston to Ellis, Minn	46.49	143,100	19,156.
1902	Jennings to Rexford, Mont	42.26	126,780	24,165.
	Marcus to Republic, Wash	69.38	118,404	22,929.
	Kelly Lake to Nashwauk, Minn	10.64	21,280	3,415.
	Boundary to Swinton, B. C	43.38	86,760	22,377.
	Laurier to Danville, B. C	16.50	32,000	6,788.
1904	Columbia Falls to Rexford	69.18	213,931	51,155.
	Swinton to Fernie, B. C	9.82	33,050	5,852.
1905	Curlew to Midway, Wash	14.52	42,600	5,729.
1906	Molson to Oroville, Wash	27.82	78,610	10,183.
	Midway to Molson, B. C	28.89	87,079	13,225.
	Sioux City to Ashland, Neb	103.15	231,353	29,659.
1907	Aneta to Devils Lake, N. D	57.72	185,699	27,259.
1908	Armington to Laurel, Mont	194.67	559,419	84,738.
		734.42	1,960,065	326,636.

In this statement the Charges for "Rental of Equipment" as shown in
Under "Train Service" is included all train service for loading, hauling
Under "Labor, Tools and Supplies" is included all labor loading, unloadi
Under "Pit Tracks" and "Stripping Pits" are included such charges
labor; cannot be separated.

Office Chief Engineer,
St. Paul, March 15, 1909.

COMPLAINANT'S EXHIBIT 18 (HOGELAND).

GREAT NORTHERN RAILWAY COMPANY.

ACTUAL COST OF BALLASTING LINES CONSTRUCTED 1901–1908, AS SHOWN BY CONSTRUCTIO

;c	Cu. Yds. Ballast	Train Service		Labor, Tools and Supplies		Repairs of Equipment		Pit Track	
		Charges	Per Yd.	Charges	Per Yd.	Charges	Per Yd.	Charges	
9	143,100	19,156.29	13.4	75,268.38	52.6	16,339.24	11.4	.....	.
6	126,780	24,165.85	19.1	57,838.96	45.6	4,987.13	3.9	.....	.
8	118,404	22,929.10	19.4	38,906.84	32.8	6,163.49	5.2	.....	.
4	21,280	3,415.72	16.0	7,178.25	33.7	483.70	2.3	.....	.
8	86,760	22,377.29	25.8	34,161.47	39.3	691.15	0.8	.....	.
0	32,000	6,788.45	21.2	10,253.24	32.0	2,000.14	6.3	.....	.
8	213,931	51,155.61	23.9	58,222.69	27.2	3,119.72	1.5	3,297.55	
2	33,050	5,852.54	18.0	9,990.86	30.1	1,231.29	3.6	154.82	
2	42,600	5,729.50	13.4	10,302.39	24.2	1,751.44	4.1	74.96	
2	78,610	10,183.12	13.0	33,166.42	42.2	746.42	0.9	.....	.
9	87,079	13,225.66	15.3	30,112.33	34.5	2,749.57	3.1	341.73	
5	231,353	29,659.12	12.8	77,499.78	33.5	10,652.47	4.6	10,670.47	
2	185,699	27,259.34	14.6	61,783.47	33.0	1,090.60	0.5	1,714.63	
7	559,419	84,738.97	15.2	234,820.54	41.9	2,023.15	0.4	12,309.18	
2	1,960,065	326,636.56	16.6	739,505.62	37.7	54,029.51	2.8	28,563.34	

Equipment" as shown in the Construction Books have been cut out. Instead thereof, it wou
rvice for loading, hauling and unloading ballast.
l all labor loading, unloading, placing ballast under ties, tamping, dressing and lining track, als
e included such charges as appear in the Construction Books so designated: on many lines the

Tracks		Stripping Pits		Transportation		Total	
	Per Yd.	Charges	Per Yd.	Charges	Per Yd.	Charges	Per Yd.
...	.....	.....	.....	909.09	0.6	111,673.00	78.0
...	.....	.....	.....	11,378.34	9.2	98,370.28	77.8
...	.....	.....	.....	8,334.33	7.1	76,333.76	64.5
...	.....	.....	.....	.....	.....	11,077.67	52.0
...	.....	.....	.....	4,773.79	5.5	62,003.70	71.4
...	.....	.....	.....	218.07	0.7	19,259.90	60.2
55	1.5	.....	.....	32,097.82	15.0	147,893.39	69.1
82	0.4	.....	.....	469.54	1.4	17,699.05	53.5
06	0.2	.....	.....	1,909.77	4.4	19,768.06	46.3
...	.....	.....	.....	5,250.17	6.7	49,346.13	62.8
73	0.4	.....	.....	7,532.81	8.6	53,962.10	61.9
47	4.6	2,994.64	1.3	3,976.18	1.7	135,452.66	58.5
53	0.9	2,888.80	1.5	2,054.72	1.1	96,791.56	51.6
18	2.2	23,171.00	4.1	43,362.90	7.8	400,425.74	71.6
34	1.5	29,054.44	1.5	122,267.53	6.2	1,300,057.00	66.3

would be proper to add an item for "Depreciation of Equipment."

, also steam shovel supplies and track tools.
the cost of putting in pit tracks and stripping has been charged directly to

Q. I direct your attention to an exhibit which has been marked "Complainants' Exhibit 18 (Hogeland)" and which is entitled "Actual cost of ballasting—Lines constructed 1901-1908, as shown by construction books." Will you briefly explain what that exhibit shows?

A. The first column in this Exhibit 18 shows the date the work was carried out. The second column shows the particular line. The third column shows the mileage. The fourth column shows the cubic yards of ballast. The fifth column shows the charges to train service. The sixth column shows the price per yard for train service. The seventh column shows the charges to labor, tools and supplies. The eighth column shows the price per yard for such labor, tools, and supplies. The ninth column shows the charges to repairs of equipment. The tenth column shows the price per yard for such repairs of equipment. The eleventh column shows the charges to pit tracks. The twelfth column shows the price per yard for such charges to pit tracks. The thirteen column shows the charges to stripping of pits. The fourteenth column shows the price per yard for stripping pits. The fifteenth column shows the charges to transportation. The sixteenth column shows the price per yard for such charges of transportation. The seventeenth column shows the total charges. The eighteenth column shows the price per yard of such total charges—amounting to 734.42 miles—a total of 1,960,065 cubic yards of ballast, and the total charges $1,300,057, or an average price per yard of 66.3 cents.

Q. Now, the exhibit shows for itself what is meant by train service, labor, tools, supplies, pit tracks and the other divisions into which the total charges have been put, does it not?

A. Yes, sir; it does. You will note that for some of the lines there are no charges to pit tracks and stripping of pits. I would say that for some of the lines we were not able to separate them—that is, they were placed under labor charges—but where we could separate them we have done so and shown them under those columns.

Q. You mean they are probably contained in the column entitled "Labor, Tools and Supplies"?

A. Yes; where they exist. For some of the gravel pits it is not necessary to do any stripping; therefore there would be no charge to stripping.

Mr. Walter: Is that taking the dirt off the top of the ballast?

The Witness: Off the top of the gravel, yes, or whatever material is used for ballast.

Q. What is the difference between train service and transportation?

A. The train service as used in this statement includes all train service for loading, hauling and unloading the ballast. That is, it is the train service in spotting cars in the pit, hauling them wherever the gravel is to be distributed, handling the trains while gravel is being unloaded, and getting the trains back to the pit again. Transportation covers the sending of the men, the supplies, camp outfit or anything of that kind, which would be used by the men on the work on other words, freight charges or passenger charges.

Q. And all kinds of items that, according to accounting methods, would be chargeable to the transportation of men and material to the place and from the place where the ballast work is going on?

A. Yes, sir; whatever transportation charges of that nature are properly chargeable to the ballasting.

Q. What have you to say on the subject of transporting men and material "to the front" as it is expressed? What has been the experience in construction work, on the Great Northern Road for instance, about the sending of men out to the work and bringing them back?

A. It has been necessary to send a great many more men than anyone would imagine would have to be sent to carry out a piece of work.

Q. Why is that, and why has it been so?

A. Well, pretty largely because the class of labor that it is possible to secure is a very floating kind. They do not want to remain in one place any great length of time. It is necessary to keep sending men to replenish the laborers all the time.

Q. From your knowledge has that been peculiar to the Great Northern Road, or has it been the common experience of Western railroads?

A. I think it has been the common experience of practically all of the Northwestern roads, at least. I could probably illustrate that by—

Q. I would like to have you illustrate it, if you can, so we will clearly understand.

A. The number of men that were sent to the construction of the Billings and Northern Line.

Q. Just where is that line?

A. That is between Billings and Great Falls, in Montana. It was under construction during 1906, 1907 and 1908.

Q. About how many miles?

A. 225 miles, the entire length of the line. Now, during 1906 the average men employed per month was 1292. We actually shipped during 1906, 8587 men to that work—nearly seven times the number of men who were the average number engaged at one time. During 1907 the average number employed per month was 2083. We actually shipped there 20281 men—almost ten times the number of them employed on the average at one time. During 1908—and during that year the track laying and ballasting was in progress—hardly any other work going on except the buildings and bridges—the average number of men employed was 528, and we actually shipped there 14,185 men.

Mr. Holden: We offer in evidence "complainants' Exhibit 18 (Hogeland)".

Mr. Teal: Isn't it already in?

Mr. Holden: I haven't formally offered it; I have only referred to it.

The Master: It will be received.

Q. The next item is "Track laying and surfacing," Mr. Hogeland, and you have arrived at the cost price of $900 per mile for the different items shown in the exhibit which enter into the laying and surfacing of track. How do you arrive at $900?

A. That is based on my judgment and supported by a statement which we prepared showing what it has actually cost to lay a surface track on a considerable mileage.

(Paper marked "Complainants' Exhibit 19 (Hogeland)".

COMPLAINANT'S EXHIBIT 19 (HOGELAND).

GREAT NORTHERN RAILWAY COMPANY.

ACTUAL COST OF TRACKLAYING AND SURFACING LINES CONSTRUCTED 1898 TO 1908 AS SHOWN BY CONSTRUCTION BOOKS.

Built	Line	Miles Laid	Train Service		Labor, Handling Material and Laying Track		Surfacing Track		Repairs of Equipment		Transportation		Total Charges	Per Mile
			Charges	Per Mile	Charges	Per Mile	Charges	Per Mile	Charges	Per Mile	Charges	Per Mile		
1898	Cloquet to Boyleston Deer River to Fosston	134.99	$ 18,153.89	$135	$ 57,081.55	$423	$ 22,551.66	$167	$ 2,252.44	$17	$ 1,154.58	$ 9	$ 101,194.12	$751
1899	Hibbing to Virginia	22.76	1,895.17	83	12,946.29	569	22,219.64	976	.....	.....	241.20	10	37,302.10	1,638
1901	Brookston to Ellis	49.98	7,290.09	146	21,632.85	433	7,875.49	157	2,137.91	43	181.81	4	39,118.15	783
1902	Jennings to Rexford	47.26	7,583.57	160	23,808.86	505	.....	.....	.....	.....	2,256.51	48	33,648.94	713
	Marcus to Republic	75.74	20,264.34	268	40,073.10	529	.....	.....	2,453.14	32	1,666.87	22	64,457.45	851
	Kelly Lake to Nashwauk	11.29	1,387.13	123	3,280.98	291	2,937.81	260	.....	.....	.....	.....	7,605.92	674
	Boundary to Swinton	49.66	11,019.17	222	23,549.13	474	.....	.....	463.16	9	933.62	18	35,965.08	723
	Laurier to Danville	19.08	2,734.78	143	9,443.06	496	2,711.37	142	221.95	11	43.61	2	15,154.77	794
1903	Souris to Westhope	17.74	1,026.04	58	10,021.85	565	7,200.08	406	139.88	8	212.96	12	18,600.81	1,049
	Granville to Mohall	49.96	9,149.40	183	15,600.14	313	11,064.14	221	1,181.04	23	333.65	7	37,328.37	747
1904	Columbia Falls to Rexford	84.96	21,330.28	251	50,207.32	591	.....	.....	36.50	.....	5,532.45	55	77,106.55	897
	Thief River Falls to Greenbush	43.70	9,083.05	207	12,930.16	296	12,203.62	280	11.88	.....	201.17	5	34,429.88	788
	Mohall to Sherwood	16.83	3,010.81	179	6,661.50	396	5,287.10	315	387.04	23	194.41	11	15,540.86	924
	Edmore to Munich	26.83	4,587.48	171	9,443.54	352	10,912.38	407	582.16	22	289.07	11	25,815.13	963
	Swinton to Fernie	11.30	1,941.98	171	7,959.60	705	.....	.....	.....	.....	93.91	9	9,995.49	885
1905	Towner Line	49.71	6,338.40	127	12,890.88	260	10,988.91	221	679.68	14	250.08	5	31,147.95	627
	York Line	37.12	5,804.60	156	10,194.93	275	9,673.52	261	712.96	19	238.51	6	26,624.52	717
	Westhope Extension	14.16	1,899.57	134	4,282.78	302	4,070.73	288	182.88	13	109.09	8	10,545.05	745
	Forbes Extension	14.92	1,442.85	97	6,260.71	419	5,952.37	399	.....	.....	106.66	7	13,762.59	922
	Munich Extension	23.15	3,650.21	157	8,961.76	387	7,119.11	308	465.09	20	171.27	7	20,367.44	879
	Curlew to Midway	16.01	3,906.05	243	8,903.03	557	.....	.....	74.30	5	371.87	24	13,255.25	830
1906	Midway to Molson	32.09	8,999.95	279	21,730.65	675	4,827.81	154	784.44	24	1,506.56	47	37,849.41	1,179
	Sioux City to Ashland	121.23	16,081.64	133	58,104.41	479	2,607.92	22	293.79	2	2,659.01	22	79,746.77	713
1907	Kelly Lake to Fermoy	26.38	5,907.74	224	14,093.18	533	8,058.43	305	225.16	9	309.43	12	28,593.94	1,083
	Aneta to Devil's Lake	66.90	17,941.08	268	40,020.06	598	17,643.93	264	157.33	2	363.89	5	76,126.29	1,137
	Berthold to Crosby	95.67	25,160.45	263	44,327.13	464	28,108.52	293	184.99	2	867.88	9	98,648.93	1,115
	Portage la Prairie Line	83.58	20,827.61	250	36,265.24	433	51,752.51	619	270.73	3	302.05	4	109,418.14	1,309
	Brandon Line	76.67	14,241.37	184	29,511.23	389	49,483.53	643	716.32	9	644.10	8	94,597.05	1,233
	Morden Line	17.58	4,766.49	271	8,985.66	511	15,143.64	861	.....	.....	24.24	1	28,920.03	1,644
1908	Armington to Laurel	228.62	65,646.43	287	138,901.12	608	.....	.....	3,077.78	13	8,672.58	38	216,297.91	946
	Totals	1,565.87	$323,071.42	206	$748,072.70	478	$320,394.72	205	$17,693.05	11	$29,933.04	19	$1,439,164.93	$919
													Less Estimated Cost of laying 940 Switches, at $25	23,500.00	15
														$1,415,664.93	$904

In this Statement the Charges for "Rental of Equipment" as shown in the Construction Books have been cut out. Instead thereof, it would be proper to add an item for "Depreciation of Equipment."

Under "Train Service" is included all Train Service in Material Yard, hauling Track Materials to the front, handling tracklaying machine, and moving boarding outfits and men.

Under "Labor, Handling Material and Laying Track," is included all labor in Material Yard, handling material, curving rail, laying tracks, putting in switches, placing tie plates, also tracklaying Tools and Supplies.

Under "Surfacing Track" is included Labor and Tools surfacing track, to put it in condition for passage of construction trains, and keep it in condition until ballasting is done.

Under "Repairs of Equipment" is shown charges to that item for Equipment actually in use tracklaying and surfacing.

Under "Transportation" is shown transportation charges for men engaged on the work tracklaying and surfacing.

Q. I direct your attention to an exhibit which has been marked "Complainants' Exhibit 19 (Hogeland), which I offer in evidence, and ask you if you will kindly explain, as briefly as you can just what it shows?

A. This Exhibit 19 shows the actual cost of track laying and surfacing lines constructed from 1898 to 1908, as shown by construction books. The first column shows the date the line was built. The second column shows the name of the line. The third column shows the mileage. The fourth column shows the charges to train service. The fifth column shows the price per mile to cover such charges to train service. The sixth column shows the charges to labor, handling material and laying track. The seventh column shows the cost per mile for such charges. The eighth column shows the charges to surfacing track. The ninth column shows the cost per mile for such charges. The tenth column shows the charges to repairs of equipment. The eleventh column shows the cost per mile for such charges. The twelfth column shows the charges to transportation. The thirteenth column shows the cost per mile for such charges. The fourteenth column shows the total charges to track laying and surfacing. The fifteenth column shows the cost per mile for such total charges. The summary showing 1565.87 miles; total charges to train service $323,071.42; making an average per mile of $206. Charges to labor, handling material and laying track $748,072.70, making a cost per mile of $478. Total charges to surfacing tracks $320,394.72, making a cost per mile of $205. Charges to repairs of equipment $17,693.05, making a cost per mile of $11. Transportation charges, $29,933.04, making a cost per mile of $19. Total charges, $1,439,164.93, making a total cost per mile of $919. Now, this included the laying of switches, amounting to 940. Deducting these at the price which we have used in our statement of the cost of reproduction—$25 each, amounting to $23,500—reduces the total charges to track laying and surfacing to $1,415,664.93, or an average cost per mile of $904. Now in this statement the charges for rental of equipment shown in the construction books have been cut out.

Q. What is meant by rental equipment?

A. It is a charge which is made against any piece of line or railroad for the use of equipment.

Q. Now I ought to have asked you that in reference to ballast but I will ask it now with reference to both these items

of work—ballasting and track laying and surfacing. How is that work ordinarily done? Is it done by contract or by the Company?

A. It is ordinarily done by contract.

Q. In the rental of equipment you would mean to cover such cases where the company equipment was used?

A. Yes, sir; so as to arrive at a charge to be made against that line for the use of that equipment.

Q. Something in the nature of a return on the value of the equipment used for that purpose. No such charge has been made?

A. It did appear in the construction books, but we cut it out for the reason that it might be considered a duplication when we come to our interest charges on equipment.

Q. That is what I wanted to make clear.

A. It is fair to charge for this equipment, but it appeared to me that if we put an interest charge in for our equipment, that we were not justified in also putting in a rental charge.

Q. Now, you show on the ballast Exhibit, which is Hogeland 18 and also on this Exhibit 19, a statement in reference to depreciation of equipment. Has there been any charge made for the depreciation of equipment used for either of these purposes?

A. No, sir; I haven't put any charge in. I think such a charge would be justified.

Q. But that has not been shown?

A. I have not shown it, no.

Q. Now what is meant by surfacing? I simply want to have you differentiate between surfacing the track and ballasting.

A. It is work which is done on track in the way of either casting in material from the side or putting in material which may be hauled from a sand pit—something of that nature,—to keep the track in reasonable condition to get over it with your construction trains. As track is first laid it is very rough and hard to haul over with any kind of a train. It is necessary to do some little work on it in the way of surfacing to make it so you can get over it with construction trains.

Q. That is the piling up of the natural material that is there or at hand, between the ties—between the rails largely—so as to hold the track in place for construction movement?

A. Yes, sir. And as I said before, either by casting in a little material from the shoulder of the embankment or haul-

ing in a little material preparatory to your ballasting, so as to keep it in shape until the ballasting can be done.

Mr. Walter: Then is that taken out before the ballast is put in?

The Witness: It depends on the kind of material. If it is material that could be mixed well with the ballast—pretty good coarse sand—it is generally left in. On the other hand, if it is more in the nature of mud, why, we generally have to shovel it out again.

Q. Then deducting the estimated cost of laying switches, you find, over a period of ten years, that the actual cost of track laying and surfacing has been $904 a mile?

A. Yes, sir.

Q. Now the $25 cost for laying and surfacing switches and the $45 cost for crossings: How were those items arrived at?

A. That is practically the actual cost of doing such work.

Q. Based on your experience in recent years?

A. Yes, sir.

Q. Roadway tools, $172,800?

A. That is based on the number of sets of sectionmen's and bridge carpenters' tools on hand as of that date.

Q. And the price?

A. And the average price per set.

Q. "Fencing right of way." You have a certain number of miles of right of way fenced?

A. Yes, sir; that is, the mileage is taken from our records on that subject, and to which we have applied the average cost per mile of right of way fence.

Q. You mean your current cost at or about the time that this exhibit purports to have been made?

A. Yes, sir; our right of way fences are not all of the same design, and it is made to represent an average of the cost of the different designs.

Q. And is that also true of the different sets of cattle guards?

A. Yes, sir; that is true of the cattle guards.

Q. Both as to quantity and as to price?

A. Yes, sir.

Q. "Crossings and signs": is what you say also true as to those items?

A. Yes, sir; that is based on the average cost of the plank, spikes and labor in ordinary crossings; and the price is applied to the number that existed in the railroad.

Q. And you show certain steel overhead bridges, $1,474,696, and some wooden overhead bridges of a lesser amount.

A. Yes, sir. Those were put in and represent the cost of reproduction of such overhead braces, either of steel or wood.

Q. And what you have said about other bridges—the basis of price and the quantity,—would apply to these?

A. Yes, sir; would apply to overhead bridges.

Q. "Interlocking and other signal apparatus." The quantities there are actual, are they, from your records?

A. Yes, sir; those are taken from our records of what existed in the railroad.

Q. And the prices?

A. The prices are based on what it would cost to reproduce them during the year 1908. The same is true of block and other signal apparatus.

Q. "Telegraph and Telephone lines." That has been worked out in substantially the same way. The exhibit shows as furnished by the Superintendent of Telegraph—(Addressing Mr. Teal)—Mr. Teal, would you desire us to call the Superintendent of Telegraph?

Mr. Teal: No.

Q. Your understanding, Mr. Hogeland is that that has been based on actual computation of quantities and going prices during the year 1908?

A. Yes, sir; that is my understanding.

Mr. Teal: There is only one question I want to ask Mr. Hogeland there. Is this line used commercially?

The Witness: The same pole line would be; not always the same wire line.

Mr. Holden: If you desire, we can file a segregation. I think there are certain commercial lines on portions of the wires. I don't suppose it would make a difference of 1/10 of one per cent. on the ultimate figures. I am perfectly willing to concede the fact that there might be a reduction upon a close segregation of the commercial wires that the Western Union Telegraph Company may own and the balance owned by the railway company, but I think it classes itself among such small items that probably it would not disturb the total figures in the slightest degree.

Mr. Walter: Did the Western Union put up any poles?

Mr. Holden: My understanding is that in the original contracts there is a division of the cost; but after the line is once constructed I think it becomes the railroad's line,

subject to the right of the Western Union, under its contract, to make certain use of it commercially; but of course, we all know that those poles are never taken down. There is nothing in the nature of a removal value to them.

Q. Now, "Station buildings and fixtures" are shown on pages 14, 15 and 16, with a summary of all of them on page 16. In order to hasten a little bit—you have taken all of the brick and stone passenger depots, showing them on pages 14 and 15. Those are actually as shown by the different station names opposite the amounts, are they?

A. Yes, sir; they are for each one what we estimate would cost to reproduce them as of 1908.

Q. And has the estimate been made upon plans and specifications on file in the offices of the Company?

A. The estimate is based on the actual cost of those buildings, together with the plans of the buildings there on file.

Q. You mean the actual original cost?

A. Yes, sir.

Q. Now, on frame passenger depots you show a gross sum of $1,588,400. How do you arrive at that?

A. That is arrived at by taking the numbers of the different classes and applying a price to each class that would represent the cost of reproduction during 1908. We did not take each individual depot. We separated them into classes.

Mr. Teal: Your depots are built in classes, aren't they? different types of depots.

The Witness: Yes, different types. And then applied the price to each depot of a certain class.

Q. And those prices are standard along the line?

A. Yes, sir.

Q. "Freight depots, brick and stone": You appear to have selected out those that are individual to themselves, and have those been computed substantially the same way that the brick and stone passenger buildings were?

A. Yes, sir; on the same basis.

Q. And frame freight sheds and loading platforms: Were those computed on substantially the same basis as frame passenger depots?

A. Yes, sir.

Q. The summary shows a collection of the different individual items into one group?

A. It does.

Q. "General office building and fixtures": That is the

building at St. Paul. Was the present cost of reproducing that figured on the plans and specifications on hand?

A. Yes, sir; together with what the building originally cost and the fixtures that are in the building. It is based on that.

Mr. Teal: Pardon me. Is this more than it originally cost?

The Witness: Yes, sir; more than it originally cost.

Mr. Walter: And when was it built?

The Witness: Built two different times. Two additional stories were put on. The original building was put up, I think, in 1890; and some eight or nine years ago two additional stories were put on.

Q. You have taken the plans and specifications and estimated what it would cost at the current prices in 1908, to reproduce that building?

A. Yes, sir.

Q. And the land value is not included in the $643,500, shown in your item?

A. No, sir.

Q. Now, "Shops, engine houses and turn tables": You have taken individual plants of that kind at different points on the line. Will you state briefly how those have been computed.

A. The different points selected are the points where we have shop buildings in connection without division terminals, and for each point we have taken our ground plans and the building plans together, with the original cost of the various buildings and arrived at the cost of reproduction of the buildings at each of those points, covering shops, engine houses and turn tables.

Q. Those specified shops, &c., do not include smaller structures, which are estimated below on page 17?

A. No, sir.

Q. Now, briefly, as to that table, how did you arrive at those prices? By classifying the different character of the structures?

A. Yes, sir; by grouping them according to the same class of structures and applying a price to each one in that class. To engine houses we have applied a price per stall, for the brick buildings, also a price per stall for the frame buildings.

Q. In structures of this kind, and, in fact, generally speaking, have you shown on your exhibit the cost of reproducing any structure that is not in present use? For instance, you

have from time to time, as the history of the road has gone on, to discard a turn table as too small, have you not?

A. Oh, yes, sir. We have changed a very large number of turn tables. This, so far as turn tables are concerned, only covers what are in use at the present time.

Q. Has that been also true of other kinds of structures—that you have had to discard them because they were obsolete and because larger ones were needed or things of that kind?

A. Yes; it applies quite largely to engine houses, where it has been necessary to make them larger to accommodate the present power.

Q. Have you figured in it, in any way, any cost of reproducing any structure that is not in present use?

A. We have not figured in it any building that does not exist at present.

Mr. Teal: Won't you please answer the question, Mr. Hogeland?

Q. That is what I wanted to get at.

A. I had in mind one particular building—that is, the Hamline depot—that is not in use. Outside of that I don't know any.

Q. That is what I had in mind. The Hamline depot is a station between St. Paul and Minneapolis, which, with the coming of the electric service here, I think, has lost its trade, and has been closed for quite a while.

A. It has been closed.

Q. And that is shown, on page 14 of your exhibit, as $3500?

A. Yes.

Q. Outside of the Hamline depot, have you in mind any structure shown in these figures that is not in current use for the operation of the railroad?

A. No, sir; I haven't in mind any building.

Q. "Shop machinery and tools" is on page 18—water stations, fuel stations and grain elevators. Will you briefly explain the basis on which those different items are computed?

A. The machinery and tools in repair shops, as well as the machinery and tools in engine houses, has been made up to show the tools that are actually in existence, and covers the cost of setting them up, as well as freight charges, to the point where they are located. Water stations include all of the appurtenances that go with a water station, including

tanks, pump-houses, pumps, engines, wind-mills, stand-pipes, wells, reservoirs, pipe lines—everything that goes to form part of a water station for supplying locomotives with water.

Q. Are those water stations actually in use in the operation of the road?

A. Yes, sir; all of them are in use.

Q. Proceed.

A. The same is true of the fuel stations, made to show the number and the cost of reproduction of each. The same is true of the grain elevators. It shows where they are located and the cost of reproduction of each.

Q. Now the figures for those four grain elevators are based upon your plans and specifications on file, are they?

A. Yes, sir; they are.

Q. And by applying going prices for structures of that kind during 1908?

A. Yes, sir.

Q. And is that also true of the storage warehouses shown on page 19?

A. Yes, sir; it is. The statement shows where they are located, and the prices show what it would cost to reproduce them as of 1908.

Q. "Dock and Wharf Property."

A. The same is true of that item.

Q. And that is true also, is it, of "Gas producing plants"?

A. It is.

Q. "Miscellaneous structures," on page 20.

A. That includes buildings as listed and not covered in any other part of the statement, and is made to cover buildings that actually exist and the cost of reproducing them as of 1908.

Q. Now, you see there, "Miscellaneous small buildings"—that is a gathering together of actual quantities, is it?

A. Yes, sir.

Q. From records?

A. Yes, sir.

Q. Have you anything further to say on that?

A. No; I don't know of anything further to say on that.

Q. Page 21 contains "Contingencies." Now, will you explain the basis upon which you have computed contingencies in this exhibit?

A. I have computed contingencies in the items as shown on page 21 as grading, tunnels, bridges, trestles and culverts, track laying and surfacing, fencing right of way, crossing and

signs, interlocking and other signal apparatus, telegraph and telephone lines, station buildings and fixtures, general office building and fixtures, shops, engine houses and turntables, water stations, fuel stations, grain elevators, storage warehouses; dock and wharf property, gas producing plants, and miscellaneous structures. I have taken it as 10 per cent of the cost of reproduction of those items, and this is put in to cover the increased cost of the work due to all unforeseen causes, such as fires, floods, tornados, accidents, strikes, and so forth.

Q. What have you to say as to the justness of that basis of computation, from your standpoint as an engineer?

A. I consider it a fair, conservative amount to be put in to cover the matter of contingencies—that is, to cover all unforeseen things that come up to increase the cost of work; and I have applied it to all of the items into which labor enters very largely in the cost.

Q. Why do you limit it to items in which labor is a large element of cost?

A. Because I thought that that was the fairest way to treat it.

Q. To what extent are contingencies shown by engineering men in estimating the cost of projected work?

A. It is almost universally used in making estimates—a contingency item of some kind.

Q. Can you tell us anything about your experience in making estimates and then doing the work, and afterwards computing and ascertaining the actual results as justifying the use of a contingency item of this kind?

A. Our experience has shown that it is absolutely necessary to use a contingency item of some amount to cover these unforeseen things that increase the cost of work; and where a contingency of ten per cent. has been used, as a rule, I have found that it is not sufficient to cover the increased cost of the work.

Q. Well, if I understand you, if you were projecting the building of this system as a new proposition, without the benefit of any experience which has been had from the building of it, you would think that ten per cent. would be too low to cover the probable actual result of such things as you call contingencies?

A. Yes; that would be my judgment—that ten per cent. would be too low.

Q. And in the actual building of the system, in certain items there has been some experience gained, as for instance,

in such matters as bridge foundations; and that experience has shown that at times the first plan proved inadequate, and more in the way of foundation was required than was estimated, has it not?

A. Yes; in many, many instances. The same would be true of tunnels.

Q. And to a certain extent, in figuring the actual quantities that have gone in on your earlier pages of this exhibit, those quantities are shown as actual quantities now in the roadbed?

A. Yes, being taken from our records they would show very closely what was actually in the structure itself.

Q. Now, to a certain extent that means that what at the outset would be contingency has passed in the exhibit to actual quantities shown on the records, as I understand?

A. Yes, the idea being that in an estimate of this kind it is probably not right to use quite as much of an item for contingency as it would be in an entirely new proposition—that is, where nothing had been uncovered and these problems as to depth of foundation and character of tunnels and material in tunnels had not been found out. In a case of that kind, why, you would probably be justified in using a larger item for contingency than you would in a case of reproduction where a great many of those things had been found out.

Q. That kind of experiences have to do only with the classes of items that involve digging into the ground, does it not—uncovering the condition of the ground underneath the surface?

A. So far as I can recall, that is true.

Q. And they do not touch upon such occurrences as fires, floods, tornados, accidents, strikes, labor troubles or things of that kind?

A. No, that would be illustrated by our experience in Montana last June during the tremendous floods. All of the railroads in Montana were washed out. If a railroad had been under reproduction at that time the cost would have been tremendously increased. It was tremendously increased for the Milwaukee and St. Paul road.

Q. With that explanation, are you able to say whether in your judgment there is any duplication between the actual quantities of such matters as grading, or tunnels, and the charging of ten per cent. for contingencies, as shown on page 21?

A. No; I think there is no duplication in that case.

Q. Pages 22 and 23 cover the steam locomotives on the system. Those are shown the different number and the differ-

ent classes, and I take it, from the appearance of those two pages, that they are an actual reproduction of the actual locomotives, is that true?

A. That is true.

Q. And are those the actual weights of those different classes?

A. Yes, sir; as I understand it. I think it should be brought out that this was prepared by the superintendent of motive power.

Mr. Teal: Do you know these number of engines? That is all I care about. If you fell satisfied the number of engines is right, that is all I care for.

The Witness: Yes, the number of engines and the number of cars is.

Q. You are satisfied of the correctness?

A. Yes, I am satisfied of the correctness.

Mr. Teal: I am satisfied they wouldn't make it inaccurately on purpose.

Mr. Walter: It is all new?

The Witness: Yes, sir; the cost of reproducing new.

Q. And the summary is shown at the foot of page 25 of all the different items of equipment?

A. Yes, sir.

Q. Now, coming to page 26. It is entitled "General Expenditures." The first item "Legal, Organization and Other Expenditures," is estimated at 3 per cent. of the total cost of road and equipment. Explain that, will you please?

A. That is taken to cover what it states—the legal organization and other expenditures—during the construction period, and would cover all expenses of organization and the expenses of all executive and accounting officers, in fact all expenditures of that nature, except engineering expenses, during the construction of the railroad.

Q. Obviously, Mr. Hogeland, that is an approximation, and rests largely, as a matter of judgment and also of experience. Now, I wish you would explain the basis, or how you arrived at 3 per cent.?

A. Well, it was taken because that is a usual figure to take for that purpose. I cannot say that based on my experience—it would be somewhat out of my knowledge—but it is a general percentage used to cover those items.

Q. Well, in the planning of a large engineering work, it is always necessary to figure a certain percentage for those kinds of expenses, is it not? That is the fact, is it not, that in all large engineering enterprises—

A. It is absolutely necessary to incur some expense in the matter of organization; and legal expenses are bound to be taken care of in connection with all of the construction work. All of your accounting work that must be done during construction would be charged to that account.

Q. And it is necessary, is it not, during the process of construction of an enterprise of this character, to maintain during the construction period both a legal organization, an organization of superintendence and accounting men?

A. And in addition to that I think a very important executive organization to plan and carry out the large undertaking.

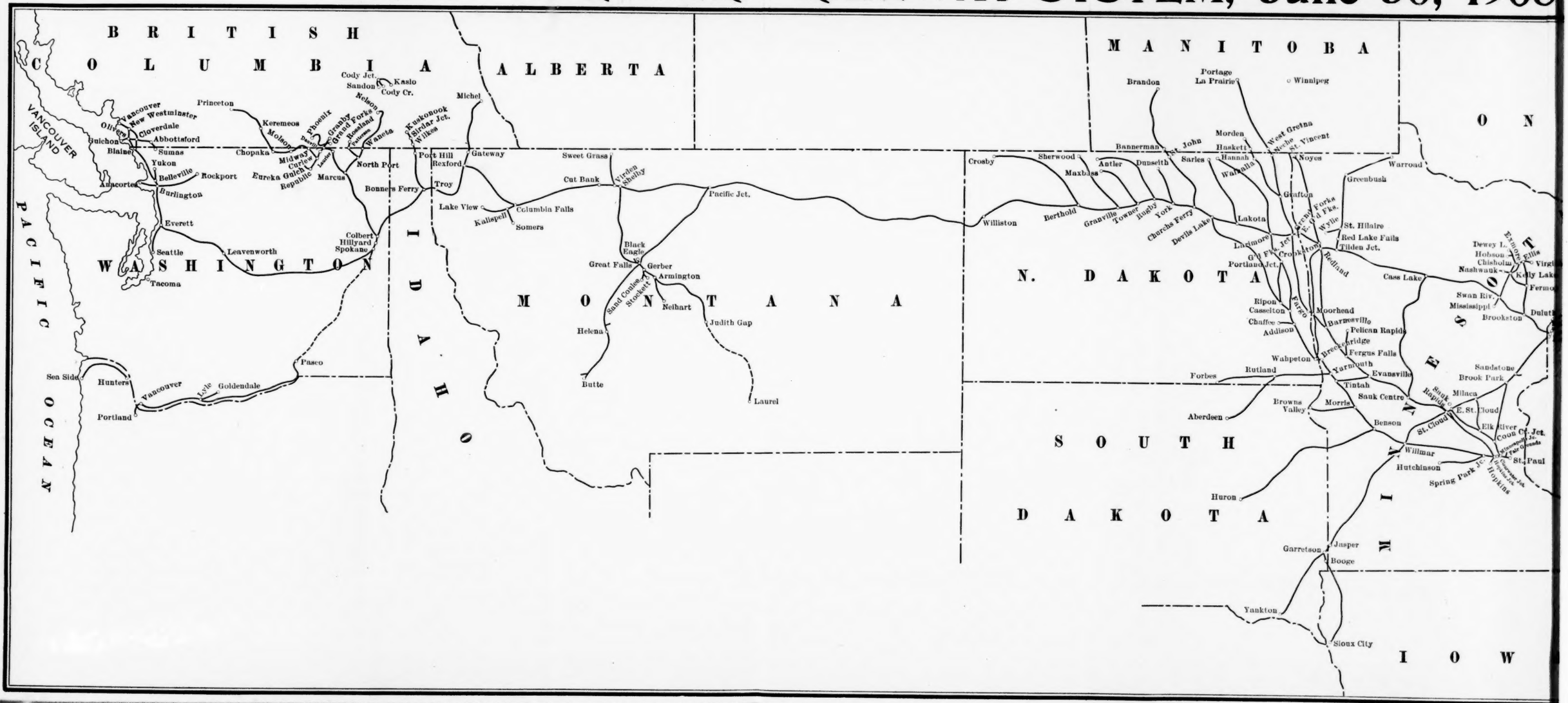
Q. The next item is "Interest During Construction." Now, have you a map here of the Great Northern line?

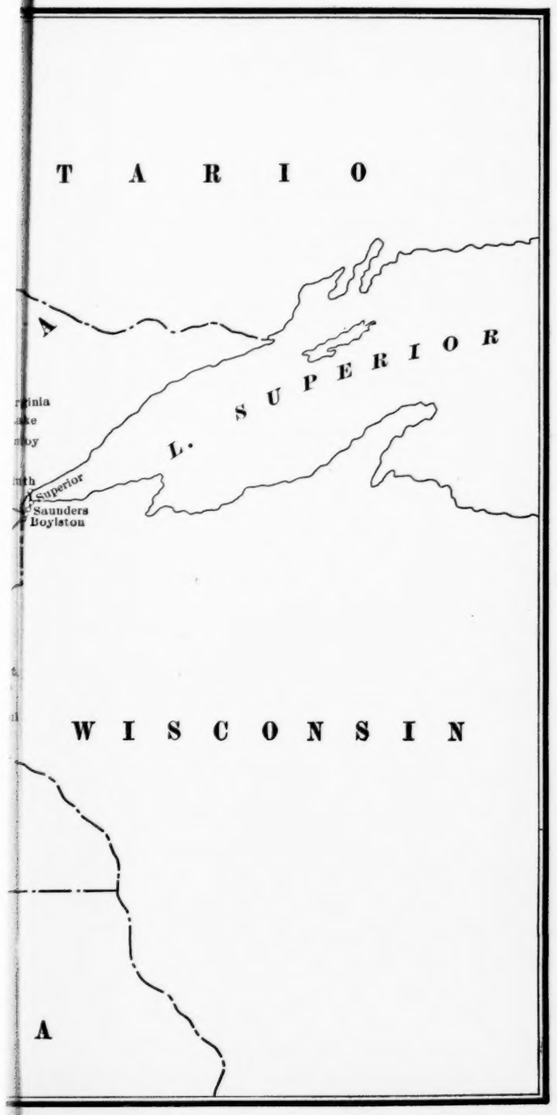
(Map produced.)

Mr. Holden: I would like to offer in evidence a map of the lines of the Great Northern System, and ask that it be marked "Complainants' Exhibit 20 (Hogeland)."

(The map produced was so marked.)

GREAT NORTHERN RAILWAY SYSTEM, June 30, 1908





WISCONSIN.

State Line at Foxboro to Superior, including connection with D. S. & W. at Saunders	21.88	
Boyleston Junct. to State Line	10.31	32.19

MINNESOTA.

St. Paul via Barnesville to International Boundary at Noyes, including line to St. Vincent	392.72	
State Fair grounds branch, St. Paul	.64	
Coon Creek Junct. to State Line at Foxboro	112.01	
To Quarries at Sandstone	2.61	
In Duluth	.38	
Elk River to Milaca	31.81	
East St. Cloud to Brook Park	58.30	
East St. Cloud to Sauk Rapids	2.13	
St. Cloud to Willmar	55.56	
Sauk Center to Cass Lake	140.00	
Evansville to Tinta	32.01	
Fergus Falls to Pelican Rapids	21.65	
Barnesville to State Line at Moorhead	22.79	
Moorhead to Redland	66.05	
Minneapolis to State Line at Breckenridge	208.56	
Hopkins Junc. to Hopkins	3.57	
Spring Park Junc. to Hutchinson	43.90	
Clearwater Junc. to St. Cloud	63.08	
To Dam, St. Cloud	2.57	
Wilmar to State Line south of Jasper	122.64	
So. Dakota Line to Iowa Line	11.27	
Benson to So. Dakota Line	46.18	
Morris to Browns Valley	48.60	
Yarmouth to Nor. Dakota Line	9.18	
North Dakota Line to Moorhead	36.80	
Wisconsin State Line to Redland	247.94	
Brookston to Ellis	46.51	
Mississippi River to Dewey Lake and Virginia	66.41	
Kelly Lake to Fermoy	23.40	
Kelly Lake to Exmore	9.69	
Red Lake Falls to Greenbush	61.23	
St. Hilaire to Wylie	7.49	
Crookston to East Grand Forks	23.60	
Branches to Mines	31.28	2052.56
Carried Forward,		2084.75

SOUTH DAKOTA.

Brought Forward		2084.75
Minn. Line near Jasper to Minn. Line near Booge, via Garretson	12.66	
Garretson to Yankton	80.94	
Minn. Line to Huron	115.31	
Nor. Dakota Line to Aberdeen	53.45	262.36

IOWA.

Minn. State Line to Ctr. of Division Str. Sioux City	76.58	76.58

NORTH DAKOTA.

State Line at Fargo to Grand Forks	77.53	
State Line at Wahpeton to Devils Lake	180.60	
Minn. State Line to Forbes	109.25	
Rutland to South Dakota Line	10.46	
Wahpeton to Minn. State Line north of Lurgan	6.02	
Addison to Chaffee	11.78	
Casselton to Larimore	74.67	
Ripon to Portland June.	41.09	
Grand Forks to Montana State Line	350.99	
Grand Forks to International Boundary at Neche	81.35	
Grafton to International Boundary north of Walhalla	53.44	
Larimore to Hannah	94.95	
Lakota to Sarles	73.13	
Churchs Ferry to International Bndy. north of St. John	59.08	
York to Dunseith	42.27	
Rugby to Antler	80.84	
Towner to Maxbass	46.10	
Granville to Sherwood	61.82	
Berthold to Crosby	89.16	1544.53

MONTANA.

North Dakota Line to Idaho Line	691.42	
Shelby to Great Falls	97.97	
Virden to International Boundary at Sweet Grass	36.54	
Columbia Falls to Lake View	51.68	
Kalispell to Somers	10.45	
Rexford to International Boundary at Gateway	8.86	
Pacific Junc. to Butte	290.78	
Great Falls to Judith Gap	121.17	
Armington to Neihart	38.27	
Carried Forward	1347.14	3968.22

Brought Forward	1347.14	3968.22
Gerber to Stocket	8.09	
Lewis to Sand Coulee	2.39	
Fair Grounds Branch, Great Falls	1.96	
B. & M. Smelter Branch, Great Falls	5.07	
Fair Grounds Branch, Helena	.68	
Mountain View Branch, Butte	3.32	1368.65

IDAHO.

Montana Line to Washington Line	80.24	
Bonners Ferry to International Boundary Port Hill	25.79	106.03

WASHINGTON.

Idaho Line to Seattle	386.91	
Hillyard to Spokane	4.30	
Colbert to International Boundary at Waneto	125.84	
Northport to International Boundary at Paterson	7.47	
Marcus to International Boundary at Laurier	27.66	
International boundary at Danville to Republic	31.70	
Republic to Eureka Gulch	9.80	
Curlew to International Boundary at Midway	14.52	
International Boundary near Molson to International Boundary at Chopaka	48.46	
Everett to International Boundary at Blaine	89.10	
Anacortes to Rockport	57.72	
Belleville to Yukon	11.38	814.86

MANITOBA.

Midland Ry. of Man. International Boundary at West Gretna to Portage La Prairie	77.01	
Midland Ry. of Man. International Boundary near Hackett to Morden	15.25	
B. S. & H. B. Ry. International Boundary near Bannerman to Brandon	69.45	161.71

BRITISH COLUMBIA.

Crows Nest Southern Ry.—Boundary at Gateway to Michel	74.18	
Nelson & Ft. Shephard Ry.—Inter. Bndy. at Waneta to Troupe Jct.	55.42	
Red Mountain Ry.—Int. Bndy. at Paterson to Rossland	9.59	
V. V. & E. Ry. & Nav. Co.—International Bdy. at Laurier to Int. Bdy. Danville, incl. line to Grand Forks	16.47	
Carried Forward	155.66	6419.47

Brought

V. V. & E. Ry. & Nav. Forks to Phoenix

V. V. & E. Ry. & Nav. C Granby Smelter

V. V. & E. Ry. & Nav. Co.— near Midway to Inter. Molson

V. V. & E. Ry. & Nav. Co.— at Chopaka to Keremeos

V. V. & E. Ry. & Nav. Co.— minster to Vancouver

V. V. & E. Ry. & Nav. Co.— to Port Guichon

New Westminster Southern national Boundary at Brownsville

Bedlington & Nelson Ry.—In Boundary at Port Hill to

Bedlington & Nelson Ry.— to Kuskonook

Kaslo & Slocan Ry.—Kas don including line from C Cody

DULUTH TERMINAL RAILWAY.

MINNEAPOLIS WESTERN RY.

UNION TERMINAL RY. (SIOUX

To

WISCONSIN.

oxboro to Superior, in-ction with D. S. & W.		
.....	21.88	
to State Line.....	10.31	32.19

MINNESOTA.

nesville to International Noyes, including line to		
.....	392.72	
nds branch, St. Paul...	.64	
et. to State Line at Fox-		
.....	112.01	
Sandstone.....	2.61	
.....	.38	
ilaca.....	31.81	
to Brook Park.....	58.30	
to Sauk Rapids.....	2.13	
Villmar.....	55.56	
Cass Lake.....	140.00	
Finta.....	32.01	
Pelican Rapids.....	21.65	
State Line at Moorhead.	22.79	
Redland.....	66.05	
State Line at Brecken-		
.....	208.56	
to Hopkins.....	3.57	
nc. to Hutchinson.....	43.90	
e. to St. Cloud.....	63.08	
Cloud.....	2.57	
e Line south of Jasper.	122.64	
e to Iowa Line.....	11.27	
Dakota Line.....	46.18	
ns Valley.....	48.60	
or. Dakota Line.....	9.18	
Line to Moorhead.....	36.80	
e Line to Redland.....	247.94	
Ellis.....	46.51	
er to Dewey Lake and		
.....	66.41	
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State Line at Wahpeton to Devils Lake	180.60	
Minn. State Line to Forbes.....	109.25	
Rutland to South Dakota Line.....	10.46	
Wahpeton to Minn. State Line north of Lurgan	6.02	
Addison to Chaffee.....	11.78	
Casselton to Larimore.....	74.67	
Ripon to Portland Junc.....	41.09	
Grand Forks to Montana State Line...	350.99	
Grand Forks to International Boundary at Neche	81.35	
Grafton to International Boundary north of Walhalla.....	53.44	
Larimore to Hannah.....	94.95	
Lakota to Sarles.....	73.13	
Churchs Ferry to International Bndy. north of St. John.....	59.08	
York to Dunseith.....	42.27	
Rugby to Antler.....	80.84	
Towner to Maxbass.....	46.10	
Granville to Sherwood.....	61.82	
Berthold to Crosby.....	89.16	1544.53

MONTANA.

North Dakota Line to Idaho Line.....	691.42	
Shelby to Great Falls.....	97.97	
Virden to International Boundary at Sweet Grass	36.54	
Columbia Falls to Lake View.....	51.68	
Kalispell to Somers.....	10.45	
Rexford to International Boundary at Gateway	8.86	
Pacific Junc. to Butte.....	290.78	
Great Falls to Judith Gap.....	121.17	
Armington to Neihart.....	38.27	
Carried Forward	1347.14	3968.22

Brought Forward	1347.14	3968.22
Gerber to Stocket.....	8.09	
Lewis to Sand Coulee.....	2.39	
Fair Grounds Branch, Great Falls....	1.96	
B. & M. Smelter Branch, Great Falls..	5.07	
Fair Grounds Branch, Helena.....	.68	
Mountain View Branch, Butte.....	3.32	1368.65

IDAHO.

Montana Line to Washington Line....	80.24	
Bonners Ferry to International Boundary Port Hill.....	25.79	106.03

WASHINGTON.

Idaho Line to Seattle.....	386.91	
Hillyard to Spokane.....	4.30	
Colbert to International Boundary at Waneto	125.84	
Northport to International Boundary at Paterson	7.47	
Marcus to International Boundary at Laurier	27.66	
International boundary at Danville to Republic	31.70	
Republic to Eureka Gulch.....	9.80	
Curlew to International Boundary at Midway	14.52	
International Boundary near Molson to International Boundary at Chopaka	48.46	
Everett to International Boundary at Blaine	89.10	
Anacortes to Rockport.....	57.72	
Belleville to Yukon.....	11.38	814.86

MANITOBA.

Midland Ry. of Man. International Boundary at West Gretna to Portage La Prairie	77.01	
Midland Ry. of Man. International Boundary near Hackett to Morden...	15.25	
B. S. & H. B. Ry. International Boundary near Bannerman to Brandon...	69.45	161.71

BRITISH COLUMBIA.

Crows Nest Southern Ry.—Boundary at Gateway to Michel.....	74.18	
Nelson & Ft. Shephard Ry.—Inter. Bndy. at Waneta to Troupe Jct.....	55.42	
Red Mountain Ry.—Int. Bndy. at Paterson to Rossland.....	9.59	
V. V. & E. Ry. & Nav. Co.—International Bdy. at Laurier to Int. Bdy. Danville, incl. line to Grand Forks.....	16.47	
Carried Forward	155.66	6419.47

Brought Forward	155.66	6419.47
V. V. & E. Ry. & Nav. Co.—Grand Forks to Phoenix.....	25.82	
V. V. & E. Ry. & Nav. Co.—Line to Granby Smelter	4.74	
V. V. & E. Ry. & Nav. Co.—Inter. Bndy. near Midway to Inter. Bndy. near Molson	28.89	
V. V. & E. Ry. & Nav. Co.—Inter. Bndy. at Chopaka to Keremeos.....	18.20	
V. V. & E. Ry. & Nav. Co.—New Westminster to Vancouver.....	14.79	
V. V. & E. Ry. & Nav. Co.—Cloverdale to Port Guichon.....	17.31	
New Westminster Southern Ry.—International Boundary at Douglass to Brownsville	24.10	
Bedlington & Nelson Ry.—International Boundary at Port Hill to Wilkes....	12.04	
Bedlington & Nelson Ry.—Sirdar Jct. to Kuskonook	3.26	
Kaslo & Slocan Ry.—Kaslo to Sandon including line from Cody Jct. to Cody	31.59	336.40
		6755.87
Duluth Terminal Railway.....		1.82
Minneapolis Western Ry.....		1.69
Union Terminal Ry. (Sioux City).....		1.28
Total Mileage		6760.66

Q. The lines in red on this map, Exhibit 20, shows the lines of the Great Northern System, do they not?

A. Yes, sir.

Q. And in the State of Montana I notice a dotted red line from Judith Gap to Laurel.

A. That represents a portion of the Billings and Northern, which was under construction at the date of this cost of reproduction.

Q. And your figures in this exhibit only include the work up to June 30, 1908, on that line, do they not?

A. Yes; except that in item 37 (the first page of Exhibit 15) we show lines under construction; and whatever had been spent on that line up to June 30, 1908, would be included in that.

Mr. Walter: Some seven millions in number.

The Witness: Yes.

Mr. Walter: Nearly eight millions.

The Witness: I wish to say that that is not the only line which is under consideration. This would be one of the lines that is under construction.

Q. And the lines represented in green, from Spokane to Portland, and a small additional line running out to Sea Side are the completed and projected lines from Spokane and Portland to Seattle?

A. Yes, sir.

Q. In those lines the Great Northern owns a half interest with the Northern Pacific?

A. Yes, sir; I understand so.

Q. On the first page of your Exhibit 15 is shown the interest of the Great Northern in that system, as the actual money which the Great Northern has advanced up to June 30, 1908, for the construction?

A. Yes, sir; that is the way I understand that.

Q That is the basis of that item on the exhibit?

A. Yes, sir.

Q. In making up your estimate as to what it would cost to reproduce the lines of the Great Northern up to the condition they were in on June 30, 1908, how many years did you assume would be necessary, with any regard to economy and expedition both, for that purpose?

A. I figured that in eight years the work might be far enough advanced so that some portions of the lines might be earning some revenue, but that for the eight year period there would be no revenue from any of the lines. Whether or not

they could all be completed in the eight years I doubt very much, especially fully ballasted and steel bridges put in as they exist to-day. I feel very sure it would take longer than the eight years to do that. But I consider, as I stated before, that after eight years there might be revenue from some of the lines, sufficient to bring a little return on the investment. For that reason I have used an eight year period as the period that the capital would be idle, and of course on that basis it would all be idle for half of that period. That is, I have taken four years' interest at six per cent. per year for all of the road items and two years at six per cent. for the equipment items.

Q. You said a moment ago that your judgment would be that for eight years there would be no revenue. Do you mean by that net revenue over and above the cost of conducting the business?

A. Yes, I meant revenue over and above any operating expenses,—any revenue that would produce returns which could be applied to the capital.

Q. I wish you would state again—I didn't quite understand it myself—the basis on which you computed the interest on the cost of the road items. What do you mean by road items? It is not necessary to read them all over, but what did you eliminate from the list on the first page of the exhibit?

A. I did not eliminate anything. All of the road items, 1 to 29, covering all of the road items—I figured interest on those items at 24 per cent., and on the equipment—which would be items 30, 31, 32 and 33—I figured at 12 per cent.

Q. The 24 per cent. is arrived at by taking an average of 4 years for the entire amount at 6 per cent.?

A. Yes, sir.

Q. And the equipment is taken—

A. At 2 years. 2 years at 6 per cent.

Q. Have you any knowledge of actual experience on the lines of the Great Northern as to how long it has been, in certain cases, before they have shown a net return after they began operation?

A. Yes. The Pacific extension from what is called Pacific Junction, just west of Havre, Montana, to the coast. The construction was started in 1890, and up until 1898 the revenue had not been sufficient to more than cover the operating expenses, and it was four years more than that before the revenue, over and above operating expenses, was sufficient to pay 6 per cent. on the original investment.

Mr. Teal: Are you cutting out the coast extension part

and charging its earnings that it made just to that particular part of the system, is that the idea? Is that the way you arrived at that?

The Witness: My understanding of that, Mr. Teal, is they took that right down to Seattle.

Mr. Teal: But the main thing I want to know is, do you know these things yourself?

The Witness: Well, the figures were furnished me by the accounting department.

Mr. Teal: That is what I am getting at.

The Witness: Yes, sir.

Mr. Teal: Covering just that piece of road in there?

The Witness: Yes.

Mr. Teal: As segregated from the balance of the system?

The Witness: That is right.

Q. From Havre, Montana, clear to Seattle?

A. Yes. That would carry it through Spokane and Wenatchee and Everett down to Seattle.

Q. But the figures, or the results, that you have testified to, were furnished you from the accounting department?

A. Yes, sir.

Q. As appearing on the books of the company?

Mr. Teal: I would like to say that unless Mr. Hogeland will submit, and is qualified to submit, to an examination from the accounting department of this company and the earnings of the company, any evidence that goes to facts of that character, I should object to it.

Mr. Holden: I think your objection is well taken. I don't mean to suggest to Mr. Hogeland. We will show that from the books of the company.

Q. Now, you show an item of stores and supplies on hand, of $8,219,581. Is that an actual inventory of the supplies on hand over the system, as of June 30, 1908?

A. Yes, sir; and was furnished us by the accounting department from the inventory of supplies on hand at that time.

Q. What have you to say, from your experience and knowledge as to the necessity for an item of that kind, or that quantity of supplies?

A. As applied to that mileage, my experience teaches that it is not excessive. It is the amount of supplies carried by the storekeepers to take care of current work on the railroad.

Q. The next item embraces lines under construction. The value of the right of way and station grounds was furnished, I take it, by the real estate department?

A. Yes, sir.

Q. The next item is actual money expended on such lines for construction purposes, as shown by the books, is it not?

A. Yes, sir; except for right of way and station grounds—that being made a separate item.

Q. But the five million and odd is the mere actual expenditure up to that date on those lines under construction?

A. Yes.

Q. It does not embrace, however, the Spokane, Portland & Seattle line?

A. No, sir.

Q. The value of the material and stock on lines under construction is, as you stated, in reference to the general stores and supplies, is it not?

A. Yes, sir; except this would be material right on hand to go into the new piece of railroad.

Q. But it had already been bought and was about to be put in place?

A. Yes, sir.

Q. The next is the value of terminal properties at Winnipeg and Tacoma. That is land, is it not?

A. That is land.

Q. Already covered by the exhibit of Mr. Hayden. The last items are interest in terminal railways. The Great Northern owns one-tenth of the Minnesota Transfer, does it not?

A. Yes, sir.

Q. And 1/9 in the St. Paul Union Depot?

A. Yes, sir.

Q. And 1/3 in the Lake Superior Terminal & Transit?

A. Yes, sir.

Q. And those figures were taken, if I understand it, from the returns made to the Minnesota Warehouse and Railroad Commission by those terminal companies?

A. Yes; except the Lake Superior Terminal and Transfer Company did not make a return to the Minnesota Commission. That was taken from the statement of the cost of reproduction of that piece of railroad.

Q. They are not a Minnesota corporation?

A. That is in Wisconsin.

Q. And the final item is the interest you have already spoken of in the Portland and Seattle road, and represents the actual charges for that construction on the books of the Great Northern road?

A. Yes, sir; as of June 30, 1908.

Mr. Holden: Now, I offer in evidence "Complainants' Ex-

hibit 15 (Hogeland)." I don't know whether I formerly offered it or not.

The Master: Mr. Holden, do you claim that in estimating the value of this road, or the property, by this method, that you are entitled to charge interest on the original investment up to such time as it begins to show a revenue over and above operating expenses?

Mr. Holden: Not stated just in that way, if your Honor please. The problems met by the engineers—and I think it is necessary to keep that clearly in mind—are to figure out, as nearly as may be, what it would presently cost to reproduce the operated system. Now, on the question of interest it seems to us the conservative thing to do is to figure just as the past has shown, that as you build this line you have got to have your money coming along, and that money, as we have to get it from outsiders, has to bear interest.

Mr. Teal: Why have you to get it from outsiders?

Mr. Holden: We haven't got it.

Mr. Teal: Then the bonds are to build this road?

Mr. Holden: Now, wait a minute. We are not talking about bonds. We are not talking about stock; we are talking about the money that goes in to build the property. We are not talking about capital issues of any kind. We are talking about the actual cost, regardless of where it comes from. Whether we have it ourselves, we would be entitled to interest on it. But it is the cost of the physical properties.

Now, in constructing these properties everybody will concede that a certain length of time, as a minimum, would be required; and during that time the money has got to go in, and will not bring back a return; and the problem is to determine a fair basis of ascertaining the interest that would have to be paid during the construction period. If the money was obtained in New York, for instance, every six months there would have to be an interest payment. Now, that all means value, as we shall ultimately argue.

The Master: The loss of the interest pending the time that the property cannot be used.

Mr. Holden: Exactly—because there seems to be no other way to reproduce the property, except to take a considerable period of time to build it. Now, we shall argue that that necessary condition of affairs means value in the property, because it cannot be gotten in any other way. And if you take and analyze the same proposition in the smaller way—like building this hotel over here to-day: Now, the builders of that hotel have had to arrange for the money to meet the pay rolls,

and they have either had to take it out of their own pockets and charge themselves, in determining the ultimate result of that investment, as any prudent man would, and interest for the use of his money, or they have had to go to an insurance company, or mortgage company, and borrow the money; and they have had to pay interest every six months. Now, that means value in that hotel property, because it cannot be avoided.

The Master: It means cost; it may not necessarily mean value.

Mr. Holden: It means cost. That is a more accurate statement. It means the cost. Now, that is the foundation; and it is only one element of determining what is the value. And if anyone comes to you and asks you what is the value of that building, you have several points in view. You can go to an architect, you can go to a contractor, or you can go to a real estate man and say, "What would it cost to rebuild that building," and he will tell you. Then you look at the surrounding conditions and see whether that building is in the line of progress in the town. Those things add value. So, I say this lays the foundation for determining this question; and on the interest item we know that you cannot reproduce anything of substantial size without it. It takes money to produce it, and it takes interest to get the money, and that enters into the value.

(A recess of a few minutes was here taken.)

Cross-Examination.

By Mr. Teal:

Q. Mr. Hogeland, you were in the employ of the Great Northern Railway Company in the years 1907 and 1908?

A. Yes, sir.

Q. And 1906?

A. Yes, sir.

Q. You were not called as a witness before the Interstate Commerce Commission in the rate case out of which this case grows,—the Lumber Rate Case—were you?

A. No, I understand not. I was in that Spokane hearing, but not in this.

Q. During the time that you have been in the employ of the Great Northern Railway Company, how many different times do you think you have testified to the value of this road and to the cost of its reproduction?

A. I testified once at Portland in 1907, and I testified again, about a month ago, in the Minnesota rates cases, and my testimony to-day, I think, constitutes three times.

Q. You think those are the only times you have testified as to the cost of reproduction?

A. Of the system?

Q. Yes.

A. Yes, sir; I think that is all.

Q. Have you testified in any cases as to the cost of reproduction of any part of the system?

A. As to Minnesota, yes.

Q. When was that?

A. About a month ago.

Q. Oh, you just testified about that?

A. Also both the system and Minnesota at that time. I believe that is all the testimony I have given as to any part of the system.

Q. Now, in this testimony that you gave in this Minnesota case, on the system, did you use the same figure you are using now?

A. Yes, sir.

Q. When you appear as a witness in a case of this character, do you feel that you are testifying as an expert for the purpose of giving the court, as nearly as you can, a true statement of the cost of reproduction?

A. Yes, sir; I certainly do.

Q. And whenever you testify before a court, that is your aim and that is your effort?

A. Yes, sir; it is.

Q. And you feel that responsibility?

A. I do.

Q. Now, the testimony taken as to the cost of reproduction in the Spokane case covered the cost of the road as of about April, 1907, did it not?

A. Yes, sir; as of about April, 1907, is my recollection.

Q. And this is as of about July 1, 1908?

A. Yes, sir.

Q. Now, in your testimony in the Spokane case, you intended in that case, in response to the questions, to give not only truthful answers, of course, but to give at that time your best judgment as to the cost of reproduction, did you not?

A. I did.

Q. And how do you think your figures were there?

A. They were considerably under the figures at the present time.

Q. Now, if you have been with the company now thirty years, you then had been with the company about 28½ years, hadn't you?

A. Yes.

Q. In other words, you had all of the experience that you now have had excepting whatever experience you have gained since that date?

A. That is true.

Q. Now, in that case, when you prepared this statement to cover organization expenses, expenses incurred in disposal of securities, purchases of material, equipment, salaries and expenses of general officers, et cetera, parties engaged in construction work, attorneys' salaries, fees and expenses, and all, incidental legal expenses incurred during construction, estimated at one per cent of all items except interest—was that your honest opinion at that time, that that would cover it?

A. Yes, sir; it was my honest opinion at that time.

Q. You now think it would take three per cent?

A. That is the way I put it in the statement, and that is what I believed it would take.

Q. And you believed the other then?

A. I believed the other then; yes, sir.

Q. Now that, in itself, made a difference in this valuation of two per cent on $348,000,000, didn't it, or it would make it?

A. It would make quite a difference.

Q. Well, it would make two per cent difference on the same amount that you figured on here, wouldn't it, Mr. Hogeland?

A. Yes, sir; it would make about that difference, 2 per cent, yes, sir.

Q. Now in your Spokane Statement your interest charge was very different from what it is now, was it not?

A. Yes, sir.

Q. In that you estimated that the entire amount of money required to reproduce the system and equipment would be unproductive for a period of two years. It is assumed the system can be reproduced in eight years, or at the rate of 1,000 miles of main and side track per year, and that about $50,000,000 would have to be raised each year. It would be two years after the beginning of the work before the first 1,000 miles would produce revenue sufficient to pay interest on the investment, and so on, with each 1,000 miles built each succeeding year; so that all the time the system was being built,

interest would have to be paid on the money raised for the construction, on the entire amount, for a period of two years. That is the way you figured it then, didn't you?

A. That was my opinion at that time; yes, sir.

Q. And you assumed the rate of interest then to be five per cent, didn't you?

A. Yes, sir.

Q. Now you have doubled the length of time, and raised the rate of interest? That is correct, too, isn't it?

A. Yes, sir.

Q. So that instead of it being the cost of reproduction, the interest charge of (in round numbers) $38,000,000, under the Spokane estimate, it is now about $93,000,000?

Mr. Holden: There has been considerable money spent on the system between the periods.

Mr. Teal: I will have it all in by and by. The reports show the difference.

Q. That is correct, isn't it?

A. That is about correct, yes—an increase of about $55,000,000.

Q. And at the time that you made the estimate for the Commission in this Spokane case you were using your very best judgment as an engineer and as an expert to give them your honest opinion as to what the interest charge would really be. That is correct, isn't it?

A. That is correct; yes, sir.

Q. And since then you have changed your opinion?

A. I have.

Q. Your whole estimate here is based on the fact, necessarily, that the money would be on hand, in order to pay for the work as it goes along; that is correct, isn't it?

A. Not all of it at one time.

Q. No, but as required?

A. As required; yes, sir.

Q. Therefore it will be borrowed, if that is the way railroads are built, or if the man who has the money will advance it—a man either with sufficient credit or sufficient money to advance these millions of dollars as the work requires it—that is correct, isn't it?

A. Well, I don't know how the money would be raised, I am sure.

Q. But you are assuming it will be on any of these amounts that are required?

A. Certainly.

Q. Therefore you must assume that whoever is building

this road either has the credit to borrow the money, or has the money himself? You must assume that, don't you?

A. Why, no, I make no assumption of that kind at all.

Q. Well, where do you get your money from?

A. I am sure I don't know how the money would be raised. But you would certainly have to pay interest on it, no matter how you raised it, until you had revenue sufficient to bring in the return.

Q. Well, let us put it in another way. What is the going rate of interest in the year 1908 upon bonds of the Great Northern system and upon bonds of the Northern Pacific system? Do you know any that are sold at a greater basis than four per cent?

A. I cannot tell you what the going rate of interest would be.

Q. Then, what did you base your 6 per cent on?

A. I based that on advice that I received from our accounting people, our executive people, as to what would have to be paid for money raised for an enterprise of this kind.

Q. Then if they had told you 8 per cent you would have used that, wouldn't you?

A. If it would come from the proper people I would say I would use it; yes, sir.

Q. The proper people are the people who gave you the 6 per cent, aren't they?

A. I think so.

Q. And if they told you 10 per cent you would have used that?

A. I would consider that they knew more about that feature of it than I do.

Q. Then so far as this report is concerned, the 6 per cent interest proposition is based upon what you were told to figure on by the accounting department of your company, is that right?

A. No, I say my opinion was influenced by advices from our executive and accounting officers, who knew much more about that feature than I do. In other words, I was told that the interest charge which I have used—the rate per year in the Spokane testimony—was too small; that the money could not be raised for an enterprise of this kind for that rate of interest. I have confidence in those people and I believe they are right.

Q. And you raised it. Now the Northern Pacific, in the Spokane case, figured on a basis of four per cent?

A. I don't know as to that.

Q. You don't know as to that?

A. No.

Q. So that that is the way you arrive at your interest charge?

A. The rate, you mean.

Q. Yes, the rate.

A. That is the reason I took the larger rate. And I want to say that that agrees with what I now believe would be required.

Q. I would like to clear this up: You made a statement a while ago that you think that a system of this character, built in the country this is being built in, would run about eight years before it would begin to pay anything above operating expenses. Did I so understand you?

A. Yes, that was my reason for using the four year period—that you would have to pay interest on your money.

Q. Then, as illustrative of that you take one section of the road, and you say that you know that particular section of the road did not earn operating expenses, or more than operating expenses, for a number of years?

A. Yes, take a period of about eight years.

Q. Now, you are familiar, to some extent, with the old Central Pacific, of course.

A. I have been over it; yes, sir.

Q. Isn't it a fact that there is to-day, in the Southern Pacific system—and the same remarks are applied to the Santa Fe, with which you are also familiar—sections of that road which, if you segregate them as sections—Take the Central Pacific through portions of Nevada, the Atchison, Topeka & Santa Fe, through certain portions of Arizona, and the same with the Southern Pacific through Arizona—that do not pay to-day?

Mr. Holden: Just a minute. Let me ask a question. Do you mean just from their local business, or from all business that is credited to that part of the line?

Mr. Teal: You can give all the business they will get out of that end of their business.

The Witness: I imagine that may be true. But I want to say there is no such desert country on the Great Northern.

Q. You have been with the Great Northern a long time, haven't you?

A. Yes, sir.

Q. Do you know when the Great Northern began to pay dividends?

A. No, I can't tell you as to that.

Q. Well, it commenced to pay dividends long before it got to the Pacific coast, didn't it?

A. Yes, undoubtedly it was paying dividends before it got to the Pacific coast.

Q. And it paid dividends all the time thereafter, didn't it?

A. Yes, it has.

Q. And do you know a time, since Mr. Hill has had charge of that road, that it has not paid over operating expenses and interest, since he acquired it many years ago?

A. The entire road?

Q. Yes. Take that whole system that he acquired.

A. I cannot speak of the first few years; but certainly in all recent years.

Q. In other words, as the road went out and was developed, it used to be Mr. Hill's boast that he made money as he went along, didn't it?

A. I cannot say as to that.

Q. Well, you know that it did, don't you? You know that as he extended that road out to the Dakotas and made his extensions from time to time it was a paying road almost from the time the rails were down, don't you?

Mr. Holden: You mean the road as a whole, do you?

Mr. Teal: Yes, I am building a road with him now. I am taking a road that he is familiar with (addressing the witness). You must be. You have been all over this.

A. Which?

Q. You have been with it thirty years and you have been all over it.

A. I want to get the full extent of your question. I don't quite understand your question.

Q. What I say is this: That as the Great Northern extended its branches and got out of Minnesota, out into the Dakotas and kept going Westward slowly, that road kept paying dividends all the time, didn't it?

A. I think it did.

Q. And it has paid dividends ever since it reached the coast, too, hasn't it?

A. I believe it has.

Q. Then what do you mean by saying that a road that would be built even as you contemplate building this road, through that same country—because you must have the same development; otherwise these terminals won't cost you that—that a road building out from cities like Minneapolis and St. Paul into cities like Duluth, into places like Great Falls, all over

this section, with a thriving community all through them, that you would sit up here and say that in your judgment a road, as it was built, even though it would take eight years, won't pay as it goes along, long before the eight years are expired?

A. No, I don't think that necessarily follows.

Q. You don't think that would follow?

A. I don't think that necessarily follows.

Q. You think, then, that it is a fair way for you to prepare an estimate to submit to the court, taking terminals, taking rights of way through one of the most fertile sections of the United States, in order to make up a statement of this kind, to say that, notwithstanding all of those things, that road would not pay expenses for eight years?

A. Why, I think that is perfectly true.

Q. You think it is?

A. Yes, sir.

Q. Was it true with the Great Northern?

A. It wasn't built in eight years.

Q. But I say, was it true with the Great Northern since Mr. Hill acquired it?

A. Was what true?

Q. The fact that it did not pay as it was extended?

A. The entire system, of course, has paid, because they had these completed lines which were earning the money.

Q. Why didn't they take eight years?

A. That is the basis, I think, that would explain why it has not failed to pay a dividend.

Q. Why do you take eight years then?

A. I explained that pretty fully—that I thought the line could be built in 8 years and placed in good enough condition to take care of the business. But it could not be fully completed in the way of ballasting and steel bridges. I do not think that could be completed in eight years.

Q. Let me ask you another question: Then you considered this plan that you have adopted, from the standpoint of the investor, the most economical way to construct that road, so as to get the best returns?

A. I think so.

Q. You think, then, as an engineer, if capitalists come to you to invest in this road, that you would suggest building a road in 8 years, and build it so that there could be no net returns in eight years, through this country?

A. Oh, I take all the returns you can get. But this is true: that whenever you try to do business at the same time

that you are constructing a railroad, the chances are you do it at a loss. Now, that has been true of practically all of our extensions—that to operate construction trains and to build a railroad and try to do commercial business on it at the same time is a pretty poor proposition.

Q. You are familiar with the Chicago, Milwaukee & St. Paul, are you not?

A. Their coast extension?

Q. Yes, you know they are extended.

A. In a general way, yes.

Q. Do you know whether or not they have operated any part of that extension for passenger and freight business as they went along?

A. Yes; I think as they went into an important town they started in operation.

Q. You know they have, don't you?

A. I have not been over it, but I have understood that.

Q. I don't suppose you have examined their literature at all, but if you have walked down town here any time you have seen their maps in the window and their advertisements about their Pacific coast extensions and receiving passengers and freight, haven't you?

A. Yes, sir.

Q. Well, then, they have operated, haven't they?

Mr. Holden: Just a minute.

A. Yes; but there is nothing to show that they have operated at anything over the cost of operating expenses.

Q. You are sure of that, are you, Mr. Hogeland?

A. No, no, as I say there is nothing to show, as far as I know, they have done that. Of course, it would be to the interest of any company building, like the Milwaukee has done, to build up their business as soon as they could, and to get on trains, even though they should operate them at a loss, in order to build up their business.

Q. So that now you think that this interest charge, as you have figured it now, is right, and the interest charge, as you figured it fifteen or eighteen months ago for the Spokane case is wrong?

A. I think it was too low before.

Q. Now then, taking this Minnesota valuation and State's valuation: how far are you and the State apart on the property in Minnesota?

A. Well, the State has made two statements. I don't know which one they intend to—

Q. Let us take the highest one. How far are you apart between their highest and your lowest?

A. I think about $40,000,000.

Q. About how much?

A. About $40,000,000, I think.

Q. About $40,000,000 for this one state?

A. I think so.

The Master: Just in the State of Minnesota?

The Witness: I think so; yes, sir. I may be off some on that. But it is about that.

Q. Now, Mr. Hogeland, there are one or two things that I do not know whether I misunderstood you about, but which I wanted to ask you about: There were three or four exhibits put in here to-day. One is Hogeland's 16, one is Hogeland's 17, one 18, and one 19. Now, I may have misunderstood you. If I did, I want to be corrected. As I understand, these various cost items appearing in these exhibits are as shown by the books of the Great Northern Railway Company?

A. Yes, sir.

Q. That is, on the books of your company we will find these items entered as you have entered them here—any of them?

A. Yes. You may have to make some additions, but you will be able to pick them all out.

Q. What I mean is this: Take your cost item on ties, or whatever it is—Do your books show any of those?

A. Certainly, they show those charges.

Q. That is not what I asked you. I asked you, did they show this character of table, so you can go there and check up this table?

A. No. You get that table in a separate way.

Q. In other wards, the way these tables are made up, then, you selected different items and prepared these tables from the items as shown by the books; that is correct, isn't it?

A. Yes; I have taken the items and shown them—

Q. Now, take for instance, the cost of the grading—contract grading, quantities and prices, from 1898 to 1907.

Mr. Holden: That is exhibit 16.

Mr. Teal: That is Exhibit 16.

Q. Now I understand you to testify that that is an accurate statement showing the actual cost for the work that is covered by that statement. Is that correct?

A. Yes, sir.

Q. And you have been able to show that from 1898 to 1907?

A. Yes, sir.

Q. And there was no particular selection made, was there?

A. No, we took the lines as they come and were built from that period, 1898, up to and including 1907.

Q. And took the actual book cost as shown by the books?

A. Yes, sir. You must recollect that this applies only to grading.

Q. Yes, I understand. And if I understand you correctly, those are the only lines built during that time?

A. There may have been some shorter, other lines, which it was more difficult to get the charges on. I am not positive as to that. But we intended to include all of the lines between those dates.

Q. From 1898?

A. Yes, sir.

Q. Now I would like to know how you arrive at an average there—take the cubic yards of earth at 19.3 per cent: How was that average arrived at?

Mr. Holden: 19.3 cents, you mean.

Q. 19.3 cents per cubic foot.

A. Cubic yard.

Q. Yes, cubic yard.

A. That is obtained by dividing the total amount paid contractors for earth by the total yards of earth, which would then give an average price per yard for earth, covering that 28,675,436 yards of earth.

Q. It wasn't an addition, then, of that column, and a division by the cost of the column itself, was it?

A. The total charges are not shown there, as you will see. It shows the total yardage and the price per yard paid contractors on each line; and then to get the average for all the lines, why, you have to divide the total charges by the total yards.

Q. And that is the way you arrived at that?

A. That is the way I arrived at that, yes.

Q. That is the way you arrived at the percentage in each column?

A. At the price per cubic yard, yes.

Q. When you got down to the average cost per yard—44.8 cents—is that per cubic yard?

A. Yes, sir; that is right.

Q. How did you get that?

A. That is obtained by dividing the total charges against grading on the construction books by the total charges.

Q. And do you think that way results in a fair statement as to the average cost of grading?

A. Per yard of all kinds of material, I think it does.

Q. Now, between the cost of dirt at 19.3 and the average, 44.8, and the average contract price of 33.4, there was a difference between the average contract price and the average cost per yard of 11.4 per cent, was there not?

A. 11.4 cents.

Q. 11.4 cents?

A. Yes.

Q. Then you think that it is fair to take that 11.4 cents and add it to the 19.3 to show the average cost of earth?

A. Yes, I think it is.

Q. Then you think—of course, if that is true—that when you let a contract for earth at 19.3 cents, you are willing to state as an engineer that there is over 50 per cent of extras over your contract, is that correct?

A. I wouldn't call it extras.

Q. What would you call it then?

A. I would call it the increased price that you must pay per yard to cover the items of overhaul, of transportation of outfits, of men, of supplies, and of extra bills of every nature that go to make up grading, and are not paid for on a yardage basis.

Q. And you think that that amounts to 50 per cent more than the contract price?

Mr. Holden: You mean now just the contract for earth alone?

Mr. Teal: I am speaking of earth, yes.

Mr. Holden: Do you understand that there are any such contracts ever let by railroad men—just to excavate earth, without rock and other things?

Mr. Teal: What difference does it make what I understand? He can answer this question.

The Witness: What is the question?

(Question read.)

Q. On the earth part.

A. It does, when you take earth separately.

Q. Now on these contracts for grading, the extras, as I understand it, that the contractor does not pay for, or which are not covered by the contract directly and specifically, are for overhaul, for one thing, and for such work as he comes across in the doing of his grading, which is not to be done and is not covered by the contract?

A. Yes; as has to be done on what we call force account proposition.

Q. Force account proposition?

A. Yes, sir—as well as the transportation of grading outfits, men, supplies, powder, everything that the contractor requires, and which, under an ordinary contract the railroad company agrees to transport free.

Q. Now under the ordinary contract, where you let a contract for grading, the grade must be left ready for the ties for laying the rails, mustn't it? Isn't that the proposition?

A. Yes. Ordinarily that is the requirement.

Q. And then what comes after that is largely on force account and really goes into the maintenance afterwards—fixing and laying the track. He has nothing to do with that? That has nothing to do with the grading?

A. No, not as a rule.

Q. And so the contractor turns over to you, or should turn over to you, under the ordinary contract, a grade ready for the ties for laying the track?

A. Yes, that is what the grading contractor has to do.

Q. And you think that in ordinary construction of a railroad, building 8,000 miles of it, that the cost on the earth, other than that covered by the contract, would be 50 per cent of the contract price?

A. It shows so in this statement. Now, to make that perfectly plain, I would like to explain it to you.

Q. I wish you would, for I cannot understand this table.

A. I will make it perfectly plain. It is well agreed, I think, among all the engineers who have had to do with this cost of reproduction, that it is necessary to add something to the prices paid contractors to cover the overhaul, the transportation of men, supplies, powder and so forth, and the extra bills, or the work which is done by contractors on force account. It is necessary to add something to the flat prices paid for earth, hard pan, loose rock and solid rock. But there has been a very great difference of opinion as to how much should be added. Now, in order to arrive at that, I went through our books covering this 10 year period, and covering 46,903,481 cubic yards of material, and arrived at the average contract price for all that material, which is 33.4 cents; and the average price per yard of all of that material, after these additional charges were in—that is, the overhaul, transportation of men, supplies, powder and extra bills as paid contractors—would represent a difference of 11.4 cents, which would have to be added to the contract prices to cover the full cost of the work. Now, whether it is right to apply that equally to earth,

hard pan, loose rock and solid rock does not make very much difference, because the result will be the same if you apply less to earth and more to the others; you will get the same amount in dollars and cents. Now, if I have not made myself clear on that—

Q. You have made yourself perfectly clear. Now, in this 11 per cent extra, how did you figure the freight in that at this time?

Mr. Holden: 11 cents extra.

Q. 11 cents extra. How did you figure the freight in that at this time?

A. Those freight charges were just as they were shown in the construction books, and I think, as a rule, were tariff charges.

Q. Were tariff charges?

A. I think as a rule they were.

Q. Now, in connection with the tariff charges on the Great Northern Railroad: why did you make such a charge as that? Why should you charge that?

A. As the cost of reproduction? In arriving at the cost of reproduction?

Q. No, no. This came from your books, you testified.

A. Yes.

Q. As a matter of fact your contracts do not provide for any such thing. Your contracts provide for free transportation for these contractors?

A. Yes, sir.

Q. Now, you say you put it in on a basis of tariff charges. Do those charges appear on your books?

A. No, sir; these total charges appear from the construction books in the accounting department, and, as I say, my understanding is that the freight charges generally are tariff rates.

Q. Well, when were they put in? That is what I am getting at. When was that charged up to tariff rates?

A. At the time the charges were made on each line.

Q. Now, are you sure of that?

A. That is my understanding, Mr. Teal. The books were opened at the time the work was going on, and the charges were made at that time. That is my understanding of it.

Q. Now, let me ask you this: You let a contract for one of your branch lines out here, and you agree to deliver the men, generally speaking, don't you?

A. To the contractor?

Q. Yes, to the contractor.
A. Yes, sir.
Q. And you agree to deliver his material, don't you?
A. Yes, sir.
Q. And there is a great number of men who sieve out—work out through the sieve—before they get to work, don't they, as you have shown?
A. Oh, a great number.
Q. Then, for instance, there was one statement here you made—I think that you said you carried an average of 528 men, and there were 14,105 men sent to that job.
A. I want to be right on that. (Referring to paper.)
Q. That is right. I put it down at the time.
A. All right.
Q. Now, those men are carried on the regular trains that run out, are they not, ordinarily?
A. Ordinarily; yes, sir.
Q. That is the ordinary custom of the railroad?
A. Ordinarily.
Q. Do I understand you, that in the books of your company there appears charged up against these men passenger fares—these 14,000 men—to that point?
A. Whatever number was sent out, and wherever they were sent from.
Q. And that is the way that the cost of construction on the Great Northern is being shown by your books to-day, as you understand it?
A. I understand so; yes, sir—that the transportation of men and supplies and material for each piece of constructed line is charged for at a tariff rate; that is, it was up to a certain time. I am not sure but what there has been a change; but so far as this statement goes, up to the date it is made, that was substantially correct.
Q. Well, this is made July 1, 1908. That is good enough for me.
A. That is substantially correct.
Q. You certainly have not hired anybody to haul your rails out for you to your branches as you have extended them?
A. Some portion of the line; yes, sir.
Q. Well, only to a moderate extent, isn't that true?
A. Not any very large extent; no, sir.
Q. Now, does the hauling of those rails appear on your books as cost of construction at full tariff rates?
A. That is my understanding, Mr. Teal.

Q. Then, when you made up your statement in the Spokane case, and made up the cost of your rails, delivered out on your road, about $3.50 or $4.00 a ton less than you do in this case, how did you arrive at that?

A. I think we figured on a half a cent a ton a mile on that.

Q. But if they were carried on your books at the full tariff, why did you figure on any other?

A. That statement was not taken from the books. That statement for the Spokane hearing was made up, without consultation, of what had been done in the way of freight charges.

Q. Now, on handling your ties on your road, you charged full tariff rates—lumber rates.

A. For ties going to a new piece of construction?

Q. Yes, any direction. You have it all figured in here.

A. They are figured at tariff rates for ties.

Q. Well, how does the accounting department do?

A. I say they are figured at full tariff rates.

Q. Full tariff rates?

A. Yes.

Q. So that this constant cost is being added to by these tariff rates?

A. Why, the freight charges is one item which enters into the increased cost of the work.

Q. Can you give the court any idea how much more freight you figured in this case, on this cost of reproduction, than you did in the Spokane case?

A. No, I cannot.

Q. Many millions of dollars, though, isn't it?

A. It would certainly be a few millions of dollars.

Q. Now, if you were able to prepare a statement showing this cost of grading from 1898, and if your estimate of 82 per cent is based on actual quantities, and your estimate now is based on an average period, why did you not bring in exact figures for the 82 per cent, instead of estimates, and only an estimate on the 18?

A. You are speaking altogether of the grading now?

Q. I am speaking of this item—this large item—$95,000,000.

Mr. Holden: Do you mean why didn't he bring in the exact cost of the 82 per cent of the grading?

Mr. Teal: I say this: That the witness has testified that as to certain figures under the head of grading—which is earth, hard pan, loose rock and solid rock—amounting to between eighty five and ninety million dollars, he says that the

books of the company show exact quantities, and that they show what they paid contractors for the work; and you have used as a basis to arrive at a figure of cost an average running over a series of years, which is right, in my judgment. Now, what I want to know is why didn't you bring in what that cost, if you have the figures.

Mr. Holden: Did he say that he had the cost of the 82 per cent? He said he had the quantity.

The Witness: No, I didn't say I had the cost of those.

Mr. Teal: Excuse me, Mr. Holden. With all due deference, I would rather have the witness say what he said. I don't think I misunderstood him.

Mr. Holden: I do not propose to sit here and let you make statements of what the witness said that the record does not bear out. The witness did not say he had the cost of 82 per cent. On the contrary, he said that because of the ancient age of a good many other lines and the fact that they had been bought from companies that built them, he did not have any record except as to the quantity.

The Witness: Let me strighten that out.

Mr. Holden: Let the witness state the fact.

Mr. Teal: Let the witness state it, and don't you state it.

Mr. Holden: Well then, don't you state it; that is the point.

The Witness: I stated that we had 56 per cent of the total amount of our yardage from original estimates and vouchers, as paid contracts—56 per cent.

Q. That is what I understood.

A. I said, in addition to that that we had 26 per cent of the quantities on record. I did not say that we had the prices for that 26 per cent. That represents work done practically altogether by the railroad company, by work trains and steam shovels, and I did not state that we had the cost of that.

Q. Well, you have the 56 per cent, of what you paid contractors?

A. We have; yes, sir.

Q. I would like to ask you, how does that 56 per cent actually compare with your estimate?

A. I cannot tell you how it does, Mr. Teal.

Q. How do you know you got 56 per cent of it?

A. Because we took the amounts off of the estimates, or the vouchers,—the quantity of cubic yards.

Q. And you never looked at what you paid?

A. Oh, yes, we looked at what we paid; but that would be

rather a complicated process to see just how that compared with these.

Q. And you did not try to see how your estimate compared with the actual cost?

A. No; because when you get back ten years the prices prevailing then have very little bearing on what you have now.

Q. Well, but you have taken them into account in submitting this statement to the Court.

A. I went back ten years, and I think that was going back to the point where it showed favorably, as compared with the present prices.

Q. What do you say for the prices in late years. We will take them on earth. Have they been higher or lower than they were 10 years ago?

A. Please repeat that question.

Q. I say, do you know that within the last three or four years the prices for grading—I am speaking now of removing earth—have been higher or lower, in your judgment, than they were in 1898 or 1901?

A. I should say somewhat higher.

Q. Which do you say is higher—then or now?

A. They have been higher the last three years than they were say, 10 years ago.

Q. But whatever is on this statement is correct, isn't it?

A. Yes, sir.

Q. If this statement don't bear that out, then you are mistaken?

A. No, I am not; because prices go by classes of work and by line. You cannot compare one line with another. That is like saying one house cost the same as another house.

Q. But as to the 56 per cent of the work that I have referred to, or that you have actual figures as to the actual cost of, and that are subject to inspection—

A. Yes, sir.

Q. —as to that, you yourself don't know how it would compare with your figures?

A. No, sir; I do not.

Q. Now, while I am on that, I would like to ask you another question: In preparing any of these estimates—for instance on this grading, where it averages 44.8 per cubic yard —now, everything was included in that, wasn't it? It included all the extra work?

A. Yes, sir; overhaul, transportation of men—

Q. Any accidents?

A. Whatever the construction books showed as chargeable to grading during construction.

Q. Any accidents?

A. Why, certainly. Anything that would be chargeable to the grading. If an accident was chargeable to grading, it would be charged to grading.

Q. Do you carry insurance against accidents?

A. As a railway company, you mean?

Q. Yes.

A. No.

Q. So that would include everything?

A. Yes, sir.

Q. Now, when you took up the question of these bridges here—just going over that briefly (I am not going to ask you any technical question about it)—and the ties: That includes every element of cost, does it not?

A. Yes, sir.

Q. And when you come to frogs and switches, and ballast, you include all those elements of cost in there?

A. Yes, I tried to include every element of cost.

Q. Now, when you came to your station buildings, did you compare the costs of those buildings with your estimates?

A. Yes, sir.

Q. How did they come out?

A. Generally we were higher than the original cost.

Q. Higher than the original cost?

A. Yes.

Q. And the work all the way through here—the fuel stations and grain elevators and all that sort of thing—you did everything you fairly could do to include everything that would show the absolute cost of duplicating this road?

A. Yes, sir; I tried to make it as fair a statement as I could and include all that would belong to the—

Q. And this statement is above the cost, isn't it?

A. Above the original cost?

Q. Yes.

A. I can't say as to that; but it would be my judgment that it is.

Q. Now, that being true, why did you add $16,000,000 for contingencies? Haven't you, as an engineer, when you sit down here and figure out all these values and put them in before the court as the completed cost, covering accidents and everything—why do you add ten per cent to an estimate of this kind? What have you left out?

A. Because you have no means of knowing that you would

have the same conditions to contend with that you had before.

Q. But, my dear sir, you here now testified you actully covered everything, and covered them to such an extent that you have gone over the original cost, that you have covered accident, and covered every element that entered into it.

A. Covered every element that I considered was properly chargeable.

Q. Well, but it was taken from your books?

A. Yes.

Q. And your books do show everything that you put in them; why do you add ten per cent in a case of that kind?

A. Because you would have such things as floods and fires and strikes of all kinds, and accidents.

Q. But you have had them already, haven't you?

A. You have had some.

Mr. Holden: Just a minute. I am going to make an objection. It is very unfair for Mr. Teal to quote the record in the way he is. Mr. Hogeland testified that on the question of these buildings he took the plans and specifications of the larger items and the plans of the building of the smaller ones, and applied present prices to the material. He did not consider the fire that may have occurred on any one during the process of building, and he did not apply it to any of those unforeseen contingencies, because he did not take the cost off the books. If he had taken the cost of a building which had been damaged by fire during the process of erection, then he would have shown that contingency; but he took the plans and specifications and applied the present prices; and I don't know any prices that apply to fires or tornados, and he has not made any such statement in his testimony as Mr. Teal seems to think he has, if you will remember his testimony.

Mr. Teal: I think I remember it.

Mr. Holden: You don't seem to remember it accurately, because you are assuming that he has figured into the cost of building every elemnnt of expense that they did incur; and he has not done any such thing. He has taken the plans of that building and applied the present prices for the material. That is all he has done.

Mr. Teal: I am very glad counsel has made this objection, because it brings out clearly what I want brought out. He wants to get a double valuation of the things that do exist and things that don't exist.

Mr. Holden: I don't any such thing.

Mr. Teal: Excuse me; I will prove in a minute you do. All this witness is testifying to is to re-create the present Great Northern Railway Company as it stands to-day—not the buildings as they stand—I am not asking about those. I am talking about a depreciation of all he has used upon the very statements that he has furnished to this court. I say I am not misquoting the witness; because he has testified that these figures that he has given cover, so far as they could, every possible contingency upon the things that now exist. We have eliminated the things that don't exist, and I am talking about buildings burned by fire.

Mr. Holden: No; but you are talking about contingencies.

Mr. Teal: I am talking about contingencies on this thing he is testifying about.

Mr. Holden: I say it is not a fair statement of his testimony to say that in estimating the cost of the Great Northern general office building, that he figured any contingencies that the actual figures may have developed in building that building. He simply took the plans of that building, and the contractors' specifications and applied the prices for brick, and mortar and lumber, and things of that kind. That is as far as his testimony has gone.

Mr. Teal: I suppose it will be a question for the Court finally to decide as to what he testified.

Q. In this question of 10 per cent, it is not a fact, Mr. Hogeland that, ordinarily speaking, when there is a construction of a railroad to be made, and an estimate is desired, that you send out your surveyors, run your preliminary lines and then make up your estimates, and gradually get more and more complete, until finally you submit, as nearly as you can, a filed estimate, and to that filed estimate it is always customary to add a percentage for unforeseen difficulties?

A. Yes, practically always.

Q. Isn't that what you mean when you say it is true that contingencies must be provided for?

A. Yes, that is what it is necessary to do; and this is along the same line.

Q. Now, Mr. Hogeland, when I simply give you a mathematical proposition, and you have every element of cost, and in figuring it out you put in every element of cost, which includes, and must include, over so many miles of track, all the different hazards that occur, would you say that the same sort of a contingency exists as in the first case I mentioned?

A. Not to the same extent; no, sir.

Q. Have you figured in here the cost of the switch-back across the Cascade Mounutains?

A. The cost of the grading is in there, but no other cost.

Q. The cost of the switch-back was in the Spokane, wasn't it?

A. Only the grading.

Q. Is that not so?

A. No, sir.

Q. You have a tunnel there now, haven't you?

A. Have a tunnel there; yes, sir.

Q. Speaking of tunnels: Let me ask you something about them. Now, as I understand, the tunnel there at Seattle, 5141 lineal feet, double track tunnel—1/2 thereof—$937,700, represents if I understood you correctly (and if not, correct me) the absolute cost of that tunnel; is that true?

A. Yes; that represents the cost of the tunnel.

Q. That was the contract price of the tunnel?

A. It wasn't done by contract.

Q. Well, but it was the price that was paid?

A. Yes, that is what the work cost.

Mr. Holden: You mean that is one-half of it.

The Witness: Yes, one-half. I say it is based on that.

Q. That runs under the city of Seattle for pretty nearly a mile, doesn't it?

A. Yes, sir.

Q. Now, did that cost include the difficulties that you had with some of the buildings, the items you had to pay on that account? Were those charged to tunnels?

A. No; I think that was a separate charge. That was charged to land damages, is my recollection.

Q. Now, taking the Cascade tunnel, how is that built?

A. That was built by company forces.

Q. Have you the exact cost of that tunnel?

A. Yes, sir; we have.

Q. How much is it?

A. I can't tell you.

Q. It is more or less than this estimate?

A. It is less than this.

Q. How much less?

A. That would be simply a guess.

Q. Well, you can ascertain. Will you please bring that in to-morrow?

A. I can bring that; yes, sir.

Q. Now, we will take the Boulder Tunnel. How was that built?

A. That was originally built by contract, but afterwards lined partly by contract and partly by company forces. I do not think the original cost of that could be furnished; I do not believe it could.

Q. Now, where is the unlined single track tunnels? Those are tunnels out along the road?

A. Yes, those are at various places, aggregating 6980 feet. The same is true of the single track timber-lined tunnels.

Q. Would you say that the cost of those, as figured here, is more or less than the actual cost?

A. I should say it was very nearly the same.

Q. Now on this question of rails—while I am right close by there—why did you figure the cost of rails in the Spokane case at $36 and why do you figure them at $39.75 now in this case?

A. I think the difference is altogether in the freight.

Q. Altogether in the freight?

A. I think it is.

Q. The Steel Company sells rails on delivered prices, doesn't it?

A. Oh, there are other concerns you can buy rails from.

Q. They are sold on delivered prices, aren't they?

A. You can purchase them that way, or you can purchase them at the mill, either way.

Q. How does the price of Belgium rails compare with the rails in this country?

A. After you pay the duty, you mean?

Q. Yes.

A. The price, I think, is somewhat higher.

Q. I say, add the duty to the price of Belgium, how much difference does it make?

A. I cannot tell you; but it is a little higher.

Q. Did you ever figure this out? I would like to ask you this because of your statement about paying the tariff on these rails to the Pacific coast—what is the tariff?

A. I think $10.

Q. $10 a ton to the Pacific coast?

A. I think so.

Q. If you really pay the tariff rate on rails to the Pacific coast, which do you think would be cheaper—Belgium rails on the Pacific coast or American rails plus the entire freight rate?

A. I don't think there would be much difference. It may be that the Belgium rails, or foreign rails, would be a little cheaper—that would be on direct coast points.

Q. Now if you were paying that sort of a rate on rails to the Pacific coast, what do you think the sea rate would be on rails from our own country?

A. I could not testify as to that.

Q. Well, do you think the water rate is higher or lower than the rail rate?

A. It is lower, in my judgment.

Q. And if you were building a railroad in the way you are going to build this, do you think you would take your coast rails by the cheapest freight rate or by the highest?

A. Oh, I would take them the most reasonable way I could.

Q. So that really, after all is said and done, Mr. Hogeland, so far as the freight is concerned, you simply have used arbitrarily—I don't mean it offensively—whatever the tariff rate might be on rails from points to points throughout the system, in figuring the cost?

A. Yes; we have, as I explained in my direct testimony, to take the center of gravity of the system and apply the freight rate which would apply to that point.

Q. And the same is true as to all other material that has gone into the road?

A. Yes, sir.

Q. Under this theory of construction?

A. Yes, sir.

Q. Now, there is quite a large element of cost, from the standpoint of terminals, also in your estimate, is there not?

A. Yes, very large.

Q. You are familiar with the situation out at Seattle?

A. Yes, sir.

Q. How many acres of terminals have you got there, do you know?

A. I don't.

Q. Do you know how much is in use?

A. Not all of it in use.

Q. And is Seattle the only place where all of your terminals are not in use?

A. No; I think there are other places where part of the terminals are not in use. It is a very wise provision, too.

Q. Oh, I think so. But I am not speaking of its wisdom; I am simply speaking as a matter of fact. The cost of those terminals, whether used or not, is in this estimate?

A. Yes, sir; that is my understanding. Now, recollect that I did not make the valuation of the right of way, so that I am simply giving you my—I may be wrong—

Q. And so far as you are concerned, interest is figured on that, isn't it?

A. Interest is figured on the entire—

Q. Cost of the terimnals?

A. The entire cost shown in the statement.

Q. Well, but I mean the terminals are in that, are they not?

A. Yes.

Mr. Holden: Well, isn't it the better way, to refer to Mr. Heydon's testimony?

Mr. Teal: No, it isn't. It is right here in his own 87,000,000.

Mr. Holden: I know; but he has taken that, as he has explained from the real estate estimate.

The Witness: It is in that item there, yes, that is right. I cannot tell you just what Mr. Heydon included, of course, in his—

Q. Would you, from an engineering standpoint, consider it a wise plan to invest $87,000,000 in the terminals before the road was built, and pay interest on it, to secure all your terminals that you had?

A. Terminals don't cost $87,000,000.

Q. Well, right of way, stations, and terminal grounds—the whole thing together.

A. Terminal is only a part of it. The entire right of way—you certainly have to purchase your right of way before you can build a railroad.

Q. Would you have your right of way purchased, so that this interest charge would be running against it, as you figure it, all the time?

A. No, sir; I would make that in the most economical way I could. But you would probably have to go in and buy part of your right of way early, if you wanted to get it at any kind of a price.

Q. But you would acquire it from time to time?

A. I think I would.

Q. And probably, to that exent, you interest charge is a little high, isn't it?

A. I don't think so. I have taken it for four years, and that would contemplate the purchases pretty equally during the entire eight year period.

(An adjournment was here taken until the morning of Tuesday, April 27th, 1909, at 10:00 o'clock.)

Room 326 Federal Building, St. Paul, Minn.
Tuesday, April 27th, 1909, 10:00 o'clock a. m.

Proceedings were resumed before Special Master Frederick Dickson, at the above time and place.

Present:

On behalf of the Complainants, Mr. Hale Holden and Mr. Charles Donnelly.

On behalf of the Defendant, Mr. Luther M. Walter and J. N. Teal.

ALBERT H. HOGELAND, recalled on behalf of the complainants, his cross-examination was resumed as follows:

By Mr. Teal:

Q. Now, Mr. Hogeland, on page 9 of your exhibit, under the heading of "Grading," you give the cubic yards of the different material moved, and your clearing and grubbing, et cetera. Now, what does that represent—or, to ask a direct question, does that represent the amount of clearing, grading, et cetera, that has been done on all the lines of the Great Northern—main line and branches—since it was commenced to be built?

A. Yes, sir; that is intended to do that.

Q. To cover everything that is shown by the books, or by your measurements and estimates?

A. There would be a number of abandoned lines that are not shown.

Q. That is what I wanted to make out. You have no abandoned lines in there at all?

A. We have some stretches of abandoned lines in this grading statement.

Q. Can you tell me how many abandoned lines you have?

A. Such lines as it appeared necessary to build, in the way that the line was originally built, in order to work out the most economical method of reproduction, the grading for those lines was included.

Q. Can you give us some estimate of how much there is of that, in dollars and cents?

A. I can give you the yardage, and can give you the dollars and cents.

Q. Let us have the yardage, if you please.

A. For the entire system it amounts to 6,195,900 cubic yards.

Q. Of what?

A. Of grading. It is not separated, according to the classification.

Q. Does that apply also to clearing and grubbing?

A. Yes, sir; for those same lines.

Q. Now, in a number of places on the Great Northern you have re-located, haven't you; that is, abandoned your first—

A. Changed the location.

Q. Where you changed your location, what did you do about the original line, so far as these figures are concerned?

A. That would be one of the sets of the abandoned lines that I mentioned, where a line has been re-located. I desire to say that this does not, by any means, include all of the abandoned lines; but we attempted to make a separation on the basis of including the lines which I figured would be more economical to reconstruct in that way, first building the comparatively light temporary line, and afterwards carrying out the more heavily completed line. Now, that would be particularly illustrated at the switch back—Cascade tunnel—where I figured it would be impractical to attempt to build the tunnel first, necessarily, to carry out economical construction we would build the switch back first, the same as originally built, and the quantities of grading, clearing and grubbing for the switch back appear in this statement. That illustrates the method that we have pursued in including any line which may have been abandoned.

Q. Did you have a switch back over the Rockies at any time?

A. No, sir.

Q. You drove the tunnel right through that?

A. There is no tunnel on our line—I am speaking now of the main line.

Q. The Northern Pacific had a switch back over the Rockies, hadn't it?

A. I think not over the Rockies; they had over the Belt Range.

Q. Well, it doesn't matter. Now, under this head of "Grading," I notice "Crib Work, $765,000." I believe you testified that that was done along at different times and is an estimate?

A. Yes, sir.

Q. That was not in your Spokane estimate at all?

A. No, sir; it was omitted from the Spokane estimate; that is one of the things that was overlooked.

Q. Now, you stated yesterday that you would get the actual cost of the Cascade tunnel?

A. Yes, sir; I think I have that.

Q. All I care for is total figures.

Mr. Holden: Do you want this to go in as an exhibit?

Mr. Teal: No, I just want the figures.

Mr. Holden: Instead of having it as an exhibit, you might just read it.

Mr. Teal: I don't want a thousand things to print in here.

Q. State the actual cost, please.

A. The actual cost, $2,532,188.08.

Q. That is about $150,000, thereabouts, less than the estimate as given to now reconstruct?

A. Yes, it is a little more than that; because you will notice it includes engineering and superintendence and tracks.

Q. Oh, yes.

A. I have given this to you just as it appears on the books.

Q. Now, just tell us how much more your estimate is, submitted here, than the actual cost?

A. I will have to do a little subtracting.

Q. Yes, that is all right.

A. I made it $264,000.

Q. Now, please state the items that you take out.

A. Take out item 1 "Engineering and Superintendence."

Q. Just state the amount, leaving off the odd cents.

A. $59,791. Take out the item "Right of Way, $8.70"; take out the item "General Expenses, 13 cents"; take the item "Tracks, $42,782.99,"—making a total deduction of $102,583.

Q. Now, then, you think that is all the deductions that should be made from that to agree with your estimate here?

A. Yes, sir; I think so.

Q. Now, let us take the question of the hospital charges—$16,593.35.

A. That, I think, is a necessary charge against the work.

Q. Is that in the 10 per cent. for contingencies which you testified about yesterday?

A. I don't know that you would regard it as in there.

Q. You wouldn't consider that in there. Now, taking the "Personal Injuries, $28,000," is that covered by your contingent 10 per cent.?

A. I don't think you can pick out just what "Contingencies" in a case of this kind would cover.

Q. You don't pretend to pick that out when you put in the 10 per cent., do you? It is just the general charge to cover whatever may arise, isn't that correct?

A. Yes, sir; to cover all increase in the cost of the work over and above what can be foreseen.

Q. Yes; but you said yesterday that it was "Damages," "injuries to men," and everything of that kind.

A. That would probably be part of it.

Q. Now, we will take the machinery, $229,000. Is that machinery charged in there a total loss after it has done its work?

A. No; but this is made up, allowing credit for machinery that may be recovered. This is a net charge to machinery.

Q. These buildings for $45,725: Are there none of those buildings left there at the tunnel?

A. No, sir; none remaining.

Q. Now, tools $139,000: Do you enter into this general estimate of yours in any other place—part of this eight millions charge of tools on hand?

A. No, sir; not at all. They are altogether tools that were used at the tunnel.

Q. Taking everything of that kind into consideration, and leaving in the "Personal Injuries," the "Hospital" charges, and all other items excepting those which I have mentioned, the cost of this tunnel, as shown by your estimate, is how much greater than the actual cost, did you say?

A. About 264,000.

Q. And you still think that ten per cent. should be added to that amount to cover the contingencies in the case of this tunnel?

A. I think so; yes, sir.

Q. And you think that would be a fair estimate and a fair way to estimate it?

A. I certainly would not want to take the contract to build it, unless I did something of that kind.

Mr. Teal: I think I will introduce this statement in evidence, and have it marked "Defendant's Exhibit 2 (Hogeland."

(Said paper was so marked.)

DEFENDANT'S EXHIBIT 2 (HOGELAND).

GREAT NORTHERN RAILWAY.

STATEMENT SHOWING CHARGES TO CONSTRUCTION.

CASCADE TUNNEL.

Engineering & Superintendence	$ 59,791.92
Labor	826,418.61
Explosives	102,722.06
Power	310,915.26
Tools	139,208.11
Buildings	45,725.74
Timber Lining	129,133.53
Masonry Lining	600,821.28
Machinery	229,114.19
Personal Injury	28,743.94
Telephone Line	138.27
Hospital	16,593.35
Right of Way	8.70
General Expenses	.13
Tracks	42,782.99
	$2,532,118.08

Q. Now, upon the question of ties—turn to page 10, please, and to your Exhibit 17. You figure your ties at 82 cents, do you not—track ties?

A. Yes, sir.

Q. Something over 23 million. Now, if I understand your Exhibit 17 correctly, you have three scales of prices. An average tie costs, from 1898 to 1907, 66.6 cents; from 1905 to 1907, 76.3 cents?

A. Yes, sir.

Q. 1907, 82 cents.

A. Yes, sir.

Q. Now, this exhibit that you are submitting to the court is made as of June 30, 1908?

A. Yes, sir.

Q. And in making your estimates on these buildings and other features of construction you have taken 1908 prices, I understand?

A. Yes, sir.

Q. In "ties" you did not take 1908 prices?

A. No; I did not consider it was fair to confine ourselves to 1908 prices for ties. The—

Q. Now, then—well, you can go on and explain, if there is something you want to explain.

A. The only explanation I have is that tie timber, so far as the eastern portion of the line is concerned, at least, is rapidly becoming exhausted, and it is fair to assume in any reproduction estimate that you could not get ties to reproduce the entire system at the prices prevailing in 1908.

Q. Then, instead of taking the actual prices, you took the high prices of 1907—that is correct, isn't it—that prevailed in 1907?

A. I don't think you can say the high prices in 1907.

Q. That was the year of the high prices in lumber?

A. I have every reason to believe that the price of ties is going to increase.

Q. And the price of your steel might increase, too, might it not? And the price of your right of way might increase, might it not?

A. Yes; but that is not so clear a case as "ties."

Q. Now, in the column headed "Charges"—will you please explain what you mean under the head of charges?

A. That means the charges against ties as the same appear on the construction books for each one of these lines, and would cover the cost of the ties as they were delivered either along the right of way or on cars, the cost of any peeling, loading, transporting ties to the material yards for each piece of construction.

Q. And at what rate were the transportation charges figured?

A. I think generally at tariff rates.

Q. So that your books, when these particular items will be checked up, will show these charges, as they appear here, as introduced in evidence?

A. Yes, sir.

Q. On the accounting books of the company?

A. Yes, sir.

Q. Now, in this same case, in connection with the testimony given by Mr. Darling, as chief engineer of the Northern Pacific, he figured ties at 55 cents. How do you account for that difference between your judgment and his as to the value of ties?

A. I think that must have been without any transportation charges. I did not hear his testimony, but it would appear—

Q. Well, we will get down to it. He testified—

Mr. Holden: What page are you on?

Mr. Teal: 211.

Q. I called his attention to the fact that he was figuring

his ties at 55 cents, and I asked him then what he figured a fir tie cost on the Pacific coast at this time—that would be the time he was figuring, April 12th. His figures were, I think, a fir tie would cost at the mills about 35 cents—38 cents at present prices. "What did you figure it at in here? I figured the general average 55 cents. I think fir ties we figured about 44 or 45 cents." Now, don't you know that as a matter of fact, in the fall of 1907 after the panic and the condition that existed in lumber rates, that there was a tremendous drop in the price of lumber all over this country?

A. I know there was quite a drop in the price of lumber in the latter part of 1907.

Q. And that it continued, and has continued all through 1908?

A. Not to the same extent that it did the latter part of 1907.

Q. And to such an extent that the mills in the south—I was going to say by the thousands—many, many hundreds closed down?

A. I think it is true that the mills did close down, not only in the south, but in the west.

Q. Now, you still think that in arriving at the price of the tie, it is right, where you are using 1908 figures in other instances, to use the prices of 1907 for ties?

A. Yes, sir; in making the statement of the cost of reproduction, I believe that is right.

Q. Now, taking the Northern Pacific price of 55 cents, and yours of 82, it makes a difference of 27 cents for ties.

A. I think you are wrong, Mr. Teal, in saying that the Northern Pacific used 55 cents. If you will turn to Mr. Darling's exhibit giving the cost of reproduction, I do not think you will find he used 55 cents.

Q. Well, in order to save time—if he did use 55 cents, it did make 27 cents a tie difference, of course?

A. That is a matter of subtraction.

Q. And also a matter of examination to see whether his exhibit shows it. Did you go over Mr. Darling's figures and he over yours?

A. No, sir; but I have seen the figures.

Q. Did you ever consult with him in getting up these figures?

A. Yes, sir; many times.

Q. Did you agree upon the figures you were going to submit?

A. No, we had a good many differences of opinion. I think our exhibits will show that.

Q. But you did consult together?

A. Certainly we did.

Q. What did you think Mr. Darling did use for ties?

Mr. Holden: Do you mean what his exhibit shows?

Mr. Teal: Yes.

A. I think he used 80 cents. I think he did.

Q. Irrespective, then, of Mr. Darling,—because I don't want to get anything in the record that don't belong in there—irrespective of Mr. Darling, and cutting that out, the price of ties in 1908 did fall very much, did it not?

A. I think not. Our prices showed that the prices of ties in 1908 were practically the same as they were in 1907.

Q. And that is true also of 1909?

A. Well, we have not gone far enough in 1909 to be able to say.

Q. Now, in your "Interlocking and Other Signal Apparatus"—I did not quite understand what you said about that that was the actual as to quantity.

A. Well, I meant by that that we took actual interlocking plants and signal apparatus and applied the prices prevailing at that time, in order to arrive at the cost of reproduction.

Q. Do your books show what the interlocking apparatus actually cost?

A. No, I think not, in every instance. They do in many instances.

Q. What would you say your estimate is—higher or lower than the actual cost in this instance?

A. I think it is very close to the actual cost.

Q. Now, your grain elevators on page 18: Take at Superior—a steel elevator. When was that built—$1,536,000?

A. I think about 10 years ago.

Q. Is that greater or less than the actual cost of that?

A. I do not think that differs much from the actual cost.

Q. In your Exhibit 18, in the cost of ballasting, the transportation charges, I was interested somewhat in noticing how they varied. For instance, in 1904, I don't know whether that is fifteen cents per yard transportation. Is it?

A. Yes, sir; it is Columbia Falls to Rexford.

Q. Some long haul, was it?

A. That is in Central Montana—a pretty long haul—and was at a time when labor conditions were about as bad as they have been, requiring very many more men to be sent there than were employed on the work.

Q. So that these charges for transportation include not only the actual handling of the material, but sending men forward to do the work from time to time?

A. Sending them from any point where the laborers were picked up, to the work; yes, sir.

Q. And at the regular transportation rates?

A. That is my understanding.

Q. Now, I did want to ask you about one thing on page 10, about "Bridges, Trestles and Culverts." There is a stone arch at Minneapolis, $867,000.

A. Yes, sir.

Q. Actual cost?

A. No, sir.

Q. More or less than actual cost?

A. It is more.

Q. How much?

A. About $217,000.

Q. Now, your steel bridges with masonry, $7,547,195. Is that actual cost?

A. No, sir; not necessarily.

Q. Is there any reason why the actual cost of your steel bridges could not be given?

A. It certainly could not be given for all. It could be given for a very large quantity.

Q. How does that price compare with actual cost?

A. I think that is somewhat higher. I can't tell you how much.

Q. Proportionately the same as the stone arch?

A. No, I think not. I am not sure. The stone arch was built in the early eighties at the time when labor was worth almost half what it is to-day. That is the reason for the large increase in reproduction cost.

Q. Did you ever have any occasion to figure, or did anyone connected with the Great Northern Railroad ever ask you to estimate or to give them the original cost of construction of their road?

A. No, I don't recall that having been asked for.

Q. Did you ever have any occasion to figure it yourself?

A. The entire system? No, I have not. I think that I would be able to do it in any way.

Q. Have you ever figured up part of it?

A. No, sir; I have not; except we may have taken detached lines. That would be the only instance that I know of where that has been done.

Q. Would you suppose the basis of capitalization of the Great Northern would have any relation to its original cost?

Mr. Holden: Now, Mr. Teal objected yesterday to my going into matters with Mr. Hogeland other than engineering, and it seems to me the same objection would lie here.

The Master: Well, I suppose this would have some bearing on the value, wouldn't it?

Mr. Teal: If he knows. I am not going to follow it up, if he don't know.

The Witness: Well, I don't know.

Q. Now, since you have been with the company, have there been any additional branch lines acquired, that the Great Northern purchased?

A. Yes, sir.

Q. Now, before they were purchased, would you, or anyone under you, make any estimate as to their physical value?

A. I don't recall any instance where that was done.

Q. Did you make any estimate of their cost of reproduction?

A. No. I don't recall having done that in any instance.

Q. Nor anybody in your office under you, at all?

A. I don't recall of that having been done.

Q. Then, in purchasing these lines, the cost of construction, or the cost of reproduction would not enter into their value, would it?

A. I think it would; yes, sir.

Q. You say you don't know of a single instance where it was done?

A. But that does not change my opinion that I believe that that does enter into the valuation.

Q. There was a valuation of the properties of your road in Wisconsin a year or two ago, or a short time ago, wasn't there?

A. Yes, sir; there was; for the Wisconsin Railway Commission.

Q. Are you familiar with their valuation—in round numbers?

A. No, I am not.

Q. You don't know how the valuation made by the state on the Wisconsin property of the Great Northern System compares with your valuation on the same property?

A. I do not.

Q. In some of your estimates here, you have something about rental equipment, haven't you?

A. No, sir; we have cut that out in every instance wherever we knew it.

Q. What did I understand you to say took the place of rental equipment to the contractors?

A. Please state that question again.

Q. What did I understand you to testify took the place of the item of rental of equipment to contractors where you furnished it to them?

A. I don't know of instances where we have rented equipment to contractors.

Q. Don't you furnish equipment to contractors—track laying or anything of that kind?

A. It is not charged to them. The Railway Company furnishes the equipment and pays the bills.

Q. Now, you have made a charge for that in your estimates, haven't you?

A. Under train service. But there is nothing in that, so far as I know, for the rental charges for the equipment.

Q. What sort of a charge did the company make to itself for that, in your estimate?

A. I don't think it is in there.

Q. Yes; but you say that the company did furnish it, and under the head of "Train Service" you did make an estimate?

A. Well, the books show the cost of wages, fuel, oil, waste, all supplies furnished for the use of equipment, repairs for equipment; but the charges for rental of so much per day for an engine, or so much per day for cars, have been cut out, because, as I explained to you, I thought that would be a duplication, considering that we charged interest for 2 years on equipment; but I do not think it is right to charge both interest and a rental charge.

Q. Then in none of these items going to make up the cost, for instance, of grading or track laying, or anything of that kind, there is no item, other than this interest charge, covering the use of the cars, locomotives, et cetera?

A. Nothing that would correspond to a rental of equipment.

Q. That is what I mean.

A. Not that I know of.

Q. I notice a charge in here to the North Bank road—I guess you call it—no you call it the Spokane, Portland & Seattle Railway—the interest in that $21,827,521. Can you tell what that covers?

A. It covers money advanced for the construction of the

Spokane, Portland & Seattle by the Great Northern—Northern Pacific, up to the date of this estimate, June 30, 1908.

Q. Does that include the purchase of the Astoria & Columbia Railroad?

A. I can't tell you whether it does or not; I presume it does.

Q. And of the Lyle road, also, doesn't it?

A. I presume it would apply to that. It represents, as I stated, the money that has been advaced; and undoubtedly whatever purchases had been made would go towards that.

Q. And also the cost of so much of the constructed road, beyond Pasco, towards Spokane, as had been done up to June 30, 1908?

A. I think all the bills—

Q. In other words, all bills of every kind that had been expended by that road, since its organization, up to that time?

A. I should suppose so; yes sir. Of course, I would have no means of knowing how the money was applied; but it represents, as I said, the money advanced to that road.

Q. Are you familiar with the work done on the Columbia and the North Bank?

A. Yes, sir; somewhat. I have been over it a number of times.

Q. Do you remember what the estimated cost per mile of road of that was?

A. No, sir; I can't tell you. I know it has exceeded very largely the estimated cost.

Q. Well, it has cost in the neighborhood of $100,000 a mile, hasn't it?

A. I understand so; yes, sir.

Q. And it is an extremely well built road, isn't it?

A. Yes, sir; a well built road.

Q. Heavy work, isn't it?

A. Yes, sir.

Q. Lots of rock work, isn't there?

A. There is a great deal of unfinished work there.

Q. There is lots of rock work also?

A. Yes, sir.

Q. And a very low grade?

A. Yes, sir.

Q. In fact, it would be called a first class main line grade, wouldn't it, and road, in any country?

A. Yes, sir.

Q. Taking its grade and slopes, do you know whether it was made for double track or single track?

A. For a very short distance it was made for a double track.

Q. And how about the tunnels?

A. My recollection is there is no double track tunnel.

Q. And the culverts are nearly all concrete; in fact, all are concrete, aren't they?

A. No, not all. There are a number of them concrete.

Q. A great many concrete?

A. A great many concrete culverts.

Q. And what is the weight of the rails on that road?

A. 85 pounds, as a rule.

Q. Now, in connection with the building of that road, from Lelas clear west, it is a fact that you are constantly harassed either by the Harriman system, or its agents, in securing right of way?

A. There was a good deal of trouble down there in securing the right of way.

Q. And it made it more than usually expensive—that feature of it—didn't it?

A. That would add to it; yes, sir.

Q. And when that road was built there were materials brought up the river, were there not, and the building was going on at different places at the same time?

A. Yes. The entire piece of work was under construction.

Q. Under construction at the same time?

A. Yes.

Q. And of course the materials in that case altogether had to be hauled or transported?

A. What materials have you reference to?

Q. Well, I refer to cement, to powder, to men, to equipment for the contractors—the very materials that you have been testifying to as having gone into the construction of a road?

A. All of the supplies and outfit for grading contractors were pretty largely brought in that way.

Q. And the road was rushed night and day, wherever it could be, was it not?

A. Oh, there was some night work done; yes, sir.

Q. Don't you know that all along on the North Bank there, the contractors worked at night wherever they possibly could?

A. They did a great deal of night work; yes, sir.

Q. And that was built during 1906, 1907 and 1908, along in there wasn't it?

A. Yes, sir.

Q. At the time that labor and material prices were at the highest, isn't that correct?

A. Yes, sir.

Q. And that has cost about $100,000 a mile?

A. That is my understanding about that. That doesn't include equipment, you understand.

Q. Oh, no, I am not including equipment.

A. And I should add to that, too, as I told you before, there is a great deal of unfinished work there.

Q. A great deal?

A. Yes, sir; a great deal.

Q. What is the character of the unfinished work, and how much is there of it?

A. I had more particular reference to the high wooden bridges that are to be filled in. That is the particular thing that I have reference to.

Q. That is the only thing you have reference to, isn't it—the trestles?

A. No; there are many permanent culverts to be put in; many permanent steel bridges to be put in.

Q. A great many?

A. A number.

Q. You said "many." What do you mean by "many" on that road, culverts and many steel bridges—culverts and many steel bridges—I really would like to know, because I thought I knew that road.

A. There are a great many culverts yet to be put in.

Q. How many steel bridges?

A. I suppose there are about 10 steel bridges yet to put in.

Q. Now in your testimony in the Spokane case, how much did your figures show the cost per mile of main track was on the Great Northern System—the entire system?

A. $62.511.

Q. How much do your present figures show the cost per mile of main track on this system?

A. It shows $75,360 per mile, omitting items 36, 37, 38 and 39, and it shows $81,250 per mile including those items.

Q. The increase then, omitting this road that we have been talking about—that is, this Spokane, Portland & Seattle, and spurs and lines under construction, and interest in terminal railways, is about 75,000?

A. Yes, sir.

Q. An increase of about $13,000 a mile?

A. Something like that.

Q. Did your system construct any single track roads in 1908?

A. Yes, sir.

Q. What roads?

A. The Billings and Northern is the one that I had in mind.

Q. The Billings and Northern?

A. Yes; also built from Fernie to Michel in British Columbia.

Q. Excuse me—which one are you reading from?

A. I am not reading from any now. I am trying to tell you—

Q. I know; but what are you looking at? Exhibit 19, isn't it?

A. It isn't on there.

Q. Oh, it isn't on there.

A. Except in Exhibit 16, the Billings and Northern is mentioned, which was under construction for three years and completed in 1908.

Q. About how many miles is that?

A. 194.14 miles of new line.

Q. Is that a mountain road?

A. Partly so.

Q. Would you call that a fairly representative piece of track of the Great Northern System, as to cost?

A. Yes, of original cost.

Q. Perhaps I was misunderstood. I am speaking now simply of the physical characteristics of the country. Would you consider that as fairly representative of the country through which the Great Northern runs, so that it would be a fair representative of the average mileage of the system?

A. It would come reasonably close to it.

Q. In building that road, you, of course, made estimates of costs?

A. Yes, sir.

Q. And now it is completed, and you know what it cost?

A. Practically so; yes, sir.

Q. How much did that cost per mile?

A. I cannot tell you without examination of our records.

Mr. Teal: Then I would ask that the witness be requested to submit a statement showing his original estimate of detail of the Billings and Northern and the actual cost.

The Witness: Yes, sir; we can do that.

Q. And in showing the actual cost I would like to have

the station buildings and matters of that kind segregated, so that it will simply show whatever the facts are.

A. Yes, sir.

Q. Of course, I don't know what the facts are and don't care. Now, what other roads did you build during this time?

A. We built from Fernie to Michel in British Columbia, a distance of about 24 miles. We also built—

Q. Excuse me. Let us take that one. Fernie to Michel is a single track road, isn't it?

A. Yes, sir.

Q. That is a mountainous country, is it not?

A. No, it is in the valley of the Elk River, a valley line.

Q. Now, the same conditions apply to that road as to the Billings and Northern. That is, you prepared an estimate and it has been built and paid for?

A. Yes, sir.

Q. I would like to have the same facts respecting that work.

A. All right; I think I can furnish it.

Q. Now, what other road did you build? I am simply trying to get some general information?

A. Yes, I understand.

Q. So that we can see what it is.

A. We built about forty miles of new line in the neighborhood of New Westminster, British Columbia.

Q. Single track?

A. Single track.

Q. And what character of building was that?

A. Well, you wouldn't call it at all mountainous, but the same character as the country adjacent to Everett, Seattle —heavily timbered country.

Q. I would like to have the same facts respecting that road.

A. That road has only recently been completed, and I doubt if the charges are all in; but I think we can get the information about the way you want it. The charges, though, I feel very sure, are not complete.

Q. Now, would you say that those three pieces—take those as an average—would be fairly representative of the Great Northern system?

A. You mean as an entire cost—as an average cost of the whole thing, do you mean?

Q. I mean now by building the railroad. Of course I am

not speaking of these terminals around here. I am speaking of the country that it goes through.

A. No, I don't think they would cover enough mountain work. The Billings and Northern is the only line that approaches mountain work. I don't think they would fairly represent an average of the system.

Q. Now, taking from Duluth, here, until you reach the Rocky Mountains—across Minnesota, North Dakota and Montana, what mountain work have you in there?

A. All of the Rockies and the Cascades.

Q. I say, until you reach the Rocky mountains in Montana, what mountain work have you from Duluth?

A. There is no mountain work in that section.

Q. There is a good deal of scraper work, isn't there?

A. Yes, sir; quite a little.

Q. Now, that is a very considerable portion of your mileage, isn't it?

A. Yes, sir; quite a proportion.

Q. Then after you cross the Rocky Mountains, and work around through the Coeur d' Alenes and up in there, and get out in Spokane, then you run across the State of Washington till you strike the Cascade Mountains before you strike any more mountains, isn't that correct?

A. Yes, sir; that is true.

Q. Then you cross the Cascade, and after you cross the Cascades, you go right down the Sound country, don't you?

A. Yes, sir.

Q. On a water level. Now, these lines of yours through Minnesota, South Dakota, North Dakota on up to Manitoba, where all these red lines appear—there is no mountain building in there, is there?

A. No mountain building; but the construction through Minnesota is far from light construction.

Q. But it is not mountain construction?

A. Not mountain country; no, sir.

Q. You understand what I mean, and I understand what you mean.

A. I understand, yes.

Q. Now, during 1908, were any roads built in this section —I am speaking of North Dakota or South Dakota?

A. No, sir.

Q. Or Minnesota?

A. No, sir.

Q. Now, have you a road here from Marcus to Nelson. Did your company build that road?

A. No, sir; that was purchased.

Q. Now, from Butte, through Helena, up to Great Falls—that road was built, wasn't it, for the company?

A. Built under an entirely separate organization—the Montana Central.

Q. But that is a constituent?

A. It is now; yes, sir.

Q. And that went through a mountainous country, didn't it?

A. Yes, from Helena to Butte.

Q. Practically all mountain, isn't it?

A. It is mountain country; yes, sir.

Q. Now, your books will show the exact cost of that road?

A. I think not; it having been built by another corporation, I don't think our books will show it.

Q. Wouldn't the books of that corporation show it?

A. They may.

Q. And hasn't that always been a constituent part of the Great Northern system—the Montana Central?

A. Well, I can't say as to that. The entire work was handled from Helena for a great many years.

Q. Well, I simply was trying to get some fair piece of road. If you haven't got it, you haven't got it. You are acquainted, to some extent, with the Canadian Pacific Railroad, aren't you?

A. Yes, with certain portions of it. I have not been over the entire system.

Q. Generally speaking, you know the character of construction on the Central Pacific in British Columbia, West, that runs all through the Rocky mountains there. It is a very mountainous road, isn't it?

A. Yes, sir.

Q. And quite a long ways from the coast? That is a fact, isn't it?

A. Well, I didn't understand your question.

Q. I say that the mountains extend quite a long ways from the coast, coming out from Vancouver?

A. Extend quite a long ways from the coast? I don't know what you mean by that.

Q. I mean the mileage from Vancouver, before you run out of the mountains, going East, is quite extensive, isn't it?

A. Yes. They follow the Fraser River for some distance before they get to the mountains.

Q. Any engineer would say they ran through a mountainous country there, wouldn't he—I mean until you get out.

A. I want to understand you fully. I have never made an entire trip over the Canadian Pacific. I know in a general way what the character of the line is.

Q. Are your familiar enough with the character of that line to state how it compares with the Great Northern?

A. No, I am not familiar enough with it to say.

Q. Are you familiar enough with it to state whether or not on its Western end it has higher grades, more grades and more mountainous country than the Great Northern has?

A. What do you mean by the Western end?

Q. Through the Fraser, through the Selkirks—isn't that what they call them—the Western end of the Canadian Pacific—the whole western end?

A. Do you mean the entire Western stretch, Mr. Teal?

Q. Yes, the entire mountain stretch?

A. No, they haven't the amount of mountains we have. Now, I am giving you that from my general opinion, not having made a trip over the line.

Q. Well, you would hardly be qualified, would you?

A. I tried to tell you I wasn't. You seem to want me to qualify.

Q. Well, I wanted you to if you could, because if you did know you would know it. That is all.

By Mr. Walter:

Q. Mr. Hogeland, isn't it true that when these men are transported out to these various works, that the cost of their transportation is taken from their wages?

A. No, sir. Most of them haven't anything, to begin with, and they certainly wouldn't go out with a proposition of that kind.

Q. Do not a good many of them have to repay the cost of their transportation where they stay quite a while?

A. No, sir; I don't know of an instance where that is done.

Q. In a good many of these roads that go to make up the Great Northern system, construction was performed by subsidiary companies—construction companies?

A. I don't think you would call them construction companies. It was carried out under a separate organization.

Q. In those organizations, were not large stockholders or owners of Great Northern stock interested?

A. I couldn't tell you about that. I have no means of knowing how the funds for construction were secured.

Q. Have no knowledge of that?

A. No, sir.

Q. How long ago did you commence the preparation of the reproduced cost of this line?

A. Began in 1906.

Q. Now, commencing with the first item: Does that represent the work of your office?

A. I don't quite understand.

Q. The first item on your exhibit 15—"Engineering," $10,000,000. Does that represent the work of your office—the preparation of those figures?

A. Yes, sir.

Q. Item 2 does not in any wise, does it? That is furnished to you.

Mr. Holden: Just a minute. I don't understand your question. If I may ask you, do you mean—

Mr. Walter: He says that item 1, $10,000,000 the figures were prepared in his office.

The Witness: I understood him to mean that.

Mr. Holden: Oh, yes.

Q. Now, item 2: Those figures were not prepared by you?

A. Yes, sir.

Q. I thought Mr. Hayden gave you that figure?

A. Oh, excuse me. That is true; that is true.

Q. Going on down those items by numbers, what ones were furnished to you by some other department of the road?

A. Item No. 2, which is "Right of way, Station and Terminal grounds"; item 17, "Telegraph and Telephone Lines"; item 21, "Shop machinery and tools"; items 30, 31, 32 and 33, being equipment: item 36, "Stores and supplies on hand"; items 37 and 39, being the amount invested in lines under construction, including the Spokane, Portland & Seattle.

Q. Now, as to all those items, the data is not your own, but was furnished you by someone else?

A. Yes, sir.

Q. As to that you have no knowledge as to its correctness?

A. No; no personal knowledge.

Q. You merely take what they furnished you as being correct?

A. Yes, sir.

Q. And as to the cost of the various supplies which go into bridges, rails, ties, frogs, switches, track fastenings, roadway tools, crossings, signs, interlocking and other signal apparatus, station buildings and fixtures, the cost items were furnished you by purchasing department, were they not?

A. No, not necessarily.

Q. Well, not necessarily, but were they in fact?

A. No. We made inquiry of the purchasing department as to prices, but our department is pretty well posted in matters of that kind, on account of our continually making estimates.

Q. In making your estimates, you get the prices from the purchasing department, do you not, Mr. Hogeland?

A. No. In very many items we do not. For instance, take station buildings.

Q. Now, from whom would you ascertain the cost of lumber and of nails, paint, cement, brick and so on?

A. That we would get through the purchasing department.

Q. As to all items of that sort you take the prices given you by the purchasing department?

A. Why, naturally we would consult with the purchasing department as to the prices of all classes of material.

Q. And you take the transportation cost from the tariff department?

A. The rate, yes.

Q. And as to those factors of reproduction, you get them from somebody else?

A. I think we get most of our knowledge that way.

Q. And you take the figures they give you and use them as your experience directs you?

A. Yes, sir; verifying them by our experience.

Q. Have you talked any with the president of your road about the items and manner of reconstructing your road?

A. Yes; the matter has been one of discussion.

Q. A good deal of—

A. Quite a live subject for three or four years.

Q. And you have always had in mind that it has more or less bearing on the amount of revenue that you are entitled to receive from the public for your services as a common carrier—Is that true or not?

A. That is true.

Q. It is also true that you have talked the matter over with the Northern Pacific people?

A. Yes, sir.

Q. And your methods of reconstruction—the various segregation of items and all of that—largely represents the combined intelligence and experience of your officials and the Northern Pacific officials?

A. Yes; and you needn't limit it to that. These different classifications are those that the Interstate Commerce Commission instruct that the valuation or cost items should be separated into.

Q. Isn't it true only to this extent; that in keeping your accounts charges should be credited to certain distinct branches of accounting?

A. Yes, sir; and we have attempted to make this up that way.

Q. But as to the cost of reproducing the road, you don't mean to say that the Commission has directed—

A. I didn't say that. I said the method of dividing.

Q. So that there is not anything in your testimony which should be understood as indicating that the Commission, in finding the reproduced value of a road, would proceed as you have proceeded?

A. No, we divided it according to the classifications which they have instructed.

Q. It is also true, is it not, Mr. Hogeland, that you were pretty severely criticized for the low valuation made in the Spokane case?

A. No.

Q. Was that satisfactory to your people?

A. Why, I never heard anybody express any dissatisfaction with it.

Q. So there was no intimation to you that your prices and your values ought to be increased?

A. I testified yesterday in regard to interest, that that was a matter of discussion between our executive and accounting officers. It was claimed I was too low. I did not hear any dissatisfaction expressed particularly.

Q. "Dissatisfaction" perhaps is not the proper term; but an intimation that the correct valuation, for the purpose for which it was intended to use these figures, should be increased?

A. Yes, yes. It was claimed that in that item I was too low.

Q. And in a good many other items you were too low?

A. Well, I think the only other item that was discussed in that way was the item for legal organization and other expenditures, in which I took three per cent. instead of one per cent. I think that was the only other item that was discussed in that way.

Q. That is one of the big items?

A. A good sized item, yes.

Q. How much of this work is represented by advice from the law department?

A. I don't know what you mean.

Q. Has the law department indicated to you the general plan to be followed in making this reproduced value?

A. No.

Q. Not at all?

A. No. They put it up to us to produce the cost of the reproduction of the system.

Q. You are quite sure you have not omitted any substantial items?

A. Oh, I keep thinking of things all the time that have been omitted.

Q. Isn't it also true, Mr. Hogeland, that largely the earth work and rock work and the expense incident to its removal counted both in the excavation and in the filling? Can you tell about that?

A. What do you mean by that?

Q. That a cubic yard of earth would be counted, when excavated, and it would also be counted when it is used as a fill?

A. You mean in our estimates here?

Q. Yes.

A. Not at all.

Q. You have been very careful to separate your figures so as not to include a single yard of excavation—

A. No, sir; I didn't say that. We have been very careful to make it the way that the work would be carried out. Wherever a yard of excavation could be put into a yard of fill, and would be economical, we have figured it that way and paid for it once.

Q. Have you gone over the line of road to see what was was done—whether these excavation were put into fills?

A. That is determined from the quantities which are paid the contractors. Wherever those quantities were used, and

wherever it was estimated from the profile, that would be figured from the profile. Wherever the excavation could be hauled out into a fill, within the limit of haul, we would only include the quantities once. Whenever the fill was beyond the limits of haul, we would have to get our material from some other point, and would therefore have to pay for it. So that we have taken our estimate of grading quantity strictly in accordance with the way the work would be carried out.

Q. You can determine in your office from the profiles, but you have not, in making your estimates, determined it from what was done in the construction of the road?

A. I think we have; and wherever we have taken the contractor's original estimates—certainly if we take it the way it was paid for, that would indicate we were doing it the way it was done.

Q. But you took the amount moved, not the amount paid.

A. Certainly, we took the amount paid.

Q. I thought I understood you testimony to indicate that the 56 per cent. represented quantity only, and not prices.

A. Well, that is true. It represents quantity, but we only took quantities paid for.

Q. You don't know whether you paid for that excavating some place else and then, taking another cubic yard to put in the fill—you don't know whether there were two numerals or one?

A. It is reasonable to assume, in doing this work again, you would do it as you did it before. If you paid a contractor for it once, in that way you would pay him for it again.

Q. Isn't it true that in the present day excavating and handling of earth is very greatly different from what it was in the original production of this road?

A. No, I don't think it is. Steam shovels are used more largely, and that is because the character of work has become heavier. All roads are seeking lower grades, and they are making heavier cuts and heavier fills to do that.

Q. They were not used at the time this road was originally built?

A. Not to the same extent.

Q. Scarcely at all?

A. You cannot say that; but not to the same extent.

Q. Now, for the first ten or 15 years this road was built were steam shovels in use?

A. Very small ones.

Q. How many miles of road do you build the first year under your plan of reproduction?

A. I did not work out a scheme of reproduction. As I testified yesterday, I figured it might be possible to reproduce it in 8 years, and if that was the case, I think it would be safe to assume that about 1/8 of it would be done each year.

Q. Where would you build first, the 1,000 miles?

A. I think the work would be constructed in practically every state in order to carry it through in that time. We would start it at junction points with the other lines and work both ways from such junction points, in order to facilitate the whole thing.

Q. How soon would you have your line from Duluth to St. Paul and out to a point in the Dakotas?

A. I think it would take about as long to reproduce the lines in Minnesota as it would in the entire system.

Q. I am speaking now of your main line from Duluth to St. Paul and out into the Dakotas. Do you mean to say you would not build that first?

A. I don't think it would be economical to do that. I think you would find the cost of construction would run up so high that you would not try to complete the lines of Minnesota, for instance, in advance of rapid progress on the other parts of the system—that is, to figure out an economical system.

Q. You have figured on the construction of a good many railroads, haven't you?

A. Yes, a number.

Q. And don't you always, as a commercial proposition, undertake to lay down the main line of road so as to have it in use for operation as soon as you can?

A. Do you mean, to expedite the work as much as you can?

Q. Yes.

A. Yes, within reasonable limits. You are controlled a good deal by the supply of labor and contractor's equipment.

Q. So as to get some revenue coming in, as soon as you can?

A. That is, of course, the main thing—to get it earning something as soon as you can.

Q. Other things are to be subordinated, so far as properly may be, to that one thing?

A. Yes. But you can carry that thing too far in the way of running your price up too much.

Q. Certainly. Now during all these eight years you would not have any part of your line earning any net revenue?

A. That is my judgment. There might be little detached pieces that would earn something; but taken as a whole, no.

Q. And during those eight years you have allowed nothing for depreciation?

A. No, sir; no depreciation has been allowed in this statement.

Q. And you are satisfied that that is the fairest method in which to calculate the cost of reproducing the Great Northern proposition?

A. There is no other way of calculating the cost of the reproduction of the property as a new property, that I know of.

Q. I am asking you if that is the fairest way you know.

A. Being the only way, it is the fairest way.

Redirect Examination.

By Mr. Holden:

Q. You have not shown in your figures here, Mr. Hogeland, any fund or charge for depreciation. By that, I mean, directing your attention, for instance, to the regulation which the Interstate Commerce Commission promulgated 2 or 3 years ago, they require for the depreciation of equipment the laying aside each year, or have left it thus far to the carriers to determine, within certain limits, just how it shall be done, but have required it to be done—that a fund shall be set aside out of earnings against depreciation of equipment. Using that as an illustration, you have shown here no sum to cover that character of an item.

A. No, sir; nothing has been included for that.

Q. And in figuring the cost of reproducing the system, you have figured the cost of reproducing it new?

A. I have.

Q. Regardless of what should be said or done on the question of depreciation of such parts of the property that would meet with depreciation?

A. That is true.

Q. And neither have you added anything for appreciation —such, for instance, as would appear in certain tables that were offered by Mr. Morgan, the chief engineer, in the Minnesota case, and was called Adaptation and Solidification of

the roadbed, which is in the nature of appreciation, as I understand it. You have shown nothing of that kind.

A. No, sir; we have shown nothing of that kind.

Q. You have added nothing to these figures which might represent the appreciation through the course of time of such portions of the property as might be said to grow in value through the effect of time and use and maintenance, and things of that sort?

A. No, sir; we have added nothing for that.

Q. Those are questions not dealt with in these figures?

A. That is true.

Q. Now, if you should, in the process of reproducing these lines, concentrate all of your work in one state—or to recur to your testimony of a moment ago—if you undertake to first construct the Minnesota lines complete as they are today, what effect would that have on, for instance, the item of labor, as compared to labor if you spread out the construction over the system in some such way as you have indicated, starting work practically in every state where there is a feasible junction with other lines of other companies now in operation.

A. It would make it altogether much easier to secure the labor, because you could get it from all of the various markets which are nearest to the point where you would be carrying out the work.

Q. That is what I mean. By spreading out the construction, and beginning it at a number of points over the system, you would get labor easier, and therefore at a lower cost, would you not?

A. Yes, sir. And then there is another consideration in that. Large contractors all have a following of smaller contractors, and naturally you would have to depend on a large number of large contractors to carry out your work. Now, it is necessary to have them have all kinds of work—rock work and team work and steam shovel work—to keep all of their sub-contractors employed. For that reason, to carry it out, the most economical way would be, you would have to distribute practically over the entire period portions of the rock work, the steam shovel work and the team work. That would be a further reason for attacking the problem in each state.

Q. Now, Mr. Walter referred to the desire to make a constructed line began to pay upon commercial business as soon

as possible. What bearing do the facilities, such as the station grounds and terminal grounds and the passing tracks and the completed main tracks for operation, have upon the doing of commercial business economically? In other words, until you have your facilities practically ready for commercial business, and have your track matured, so that operation can go on expeditiously, and your passing tracks in, so that trains will not meet delay, and all that class of facts, is it possible to make the commercial business return anything like a result, which does come after your system is completed in that way?

A. Why, no. Your cost of operation is increased by all of those facilities that are not ready, not prepared, for the economical handling of any business.

Q. And to the degree that the road lacks those facilities the commercial business costs more, does it not?

A. That is certainly true.

Mr. Holden: Now, Mr. Walter called attention to certain items in this Exhibit 15 which Mr. Hogeland indicated by the numbers shown on the first page, in which the figures were turned over to him by other officials of the company. I understood yesterday, when I was going over the matter with Mr. Hogeland on direct examination, that such items as those referred to were not criticized because Mr. Hogeland was not the immediate officer who prepared them. I do not want to have any misunderstanding on that subject, and I propose to call, if it is desired, the witnesses who made up the figures on those particular items, so that I will have this record show the basis upon which each of the items was made, as well as those made under Mr. Hogeland's supervision. If there is any claim made, for instance, that the figures shown for equipment are not shown to your satisfaction, so far as the basis on which they are made, and the prices applied, and the quantities made use of, I think it is no more than fair that the statement should be made now, so that there will be no misunderstanding on that subject.

Mr. Walter: Of course, we do not accept any testimony given as being conclusive and final. We shall undertake, at the proper time, to meet such testimony as we think should be met; and if you have any testimony which you want to add, you have perfect freedom to do it. We do not agree that any of it is to be accepted beyond what its evidentiary value would indicate. That is entirely with you.

The Master: Would you object to these, for instance, on the ground that they are hearsay.

Mr. Walter: I think his testimony, largely, indicates that it is hearsay.

Mr. Holden: Well, I think it is proper now. I just call attention to the decisions on this subject—for instance, in the North Dakota Rate case, tried several years ago, before Judge Amidon and Judge Thayer, I think that substantially this method was adopted in showing, not these kind of facts, but evidence from the records of the company. For instance, there the question was in relation to the earnings and expenses in rate matters, revenue matters, and expense matters, bearing upon the rate laws that were being tried there, and the chief officer from this or that department of the company was called and testimony was introduced, in the way of statements, collected, as they were, through the various divisions of the company's forces, relating to those subjects, and, as supplementary to those exhibits, the offer was made, as is made here, to produce any and all records, and any and all witnesses, and men, who took part in preparing the statistical data and the fullest offer was made, as I make now and have made, to submit the basis of all the figures for the most critical examination that may be desired. Objection was made later on in the progress of that case that the tables and statistics were hearsay—that was the meat of the objection—and the court said that, with that offer and growing out of the nature of the case, the proof was admissible, and they took it and passed upon it as competent evidence.

The Master: Failure to attack.

Mr. Holden: In connection with the offer to give all the basis and the records and the men, and the failure on the part of the other side to attack it, because it was, in a sense, partly hearsay, as gathered by one man into his hands, from various sources. Now, I do not want to have any misunderstanding in this case. If you object to any of this testimony on the ground that it is hearsay, if it takes all summer, we will produce the witnesses here. And, of course, if your objection is that, granted the basis to be reasonable and fairly and accurately and honestly made up, as far as human witnesses are able to make computations from long and involved records, that the evidentiary value is not as claimed, why, that is a wholly different matter. But I do not want to have it come up afterwards, that because we do not produce the superintendent of motive power, and that he did not go on the stand,

and, under oath, testify to the number of locomotives and the basis of the prices, that therefore that part of the exhibit is incompetent. I do not want to have an objection of that kind made after we rest our case. I think it is a perfectly fair statement to make, and a fair request to make, and that we ought to have an understanding on that subject.

Mr. Walter: I will just state frankly our position in this case. The cost of reproduction of these two systems is completely new to this case. We shall probably avail ourselves of your offer, and your kind offer, to turn over all your records and everything for examination by parties employed by us. That will take quite a good deal of time. We shall do all we can to expedite it. So far as these figures you give, they differ widely from figures heretofore given in other cases, regarding similar matters, and we cannot really accept them as being complete and entitled to all credit that evidence might have in court. We do not expect you to call the superintendent of motive power to say that an engine is worth so much; we simply have to take what you give us, and check it up. That is the best we can do, and that is all we can promise you in this case. We do not say that we won't object as to any feature of this.

Mr. Holden: Of course the exhibit has been introduced without objection, and my understanding now is that you, in effect, concede, as an illustration, that if the superintendent of motive power were called and put upon the stand, he would testify to the facts relating to equipment, as shown not only on the first page of Exhibit 15, but also in the detail following, relating to equipment, which appears on pages 22 and following.

Mr. Teal: May I ask something?

Mr. Holden: Yes.

Mr. Teal: Now, I think our understanding is the same on this. If I understand this matter rightly this exhibit goes in upon the proposition that, instead of calling the superintendent of motive power, for instance, to show that there are 1078 engines, we are conceding that if the superintendent of motive power was called he would testify to that, and he would testify that this was their value; but we are not conceding that that is their value at all.

Mr. Holden: Oh, no; I am not asking that.

Mr. Teal: We are not conceding any of that, nor that the basis is proper. There is one thing in connection with that, while the engineer is on the stand, which might save a little

time. If he knows, I would like to have him state to the court what basis of value he arrived at in figuring this value of a locomotive, for instance. That is, does that purport to be the cost price, plus the freight, on that locomotive? Is that the idea?

The Witness: No, sir; it purports to be the cost of reproducing it as of the year 1908.

Mr. Teal: How would that be taken? That is the point I want to make—just to get that a little clear. How would you figure that cost?

The Witness: Well, that was figured on the basis of what the manufacturers would charge for that locomotive to-day, plus any cost of landing it at St. Paul.

Mr. Holden: When you say "to-day" you mean as of—

The Witness: I mean as of that date.

Mr. Teal: In other words, it is the manufacturing cost plus freight?

The Witness: To the point of delivery.

Mr. Teal: To the point of use or point of delivery?

The Witness: Yes.

By Mr. Walter:

Q. The condition, all new, all equipment, and without any reference as to their present condition—that is, as of June 30th?

A. Yes.

By Mr. Teal:

Q. Now, for instance, we will take the passenger cars. Without going into any details about it, the same rule, as you understand, was observed in those prices?

A. Yes, sir; the same rule.

Q. Now, in the freight cars, the same rule was observed in fixing the value?

A. Yes, sir.

Q. There was no allowance made for freight carried by those cars to the point of delivery, but it is just simply the cost of the car, plus the freight on that car, to the point or delivery or its haul?

A. That is my understanding; yes, sir.

Mr. Walter: "Tools," the same way.

Mr. Holden: I understand that is the general basis of all these figures.

Mr. Teal: I don't see any occasion for putting you or anyone to the trouble to say the man would testify to that. I am willing to concede if the men were called they would testify that way.

Mr. Holden: Of course, I anticipate that there will be a contest on the ultimate evidentiary value of all our proof; but the mere question I raised, and it was suggested by Mr. Walter's cross examination—

Mr. Teal: I think you attached more weight to that than was intended.

Mr. Holden: —was to be made, because the actual witnesses were not brought into court.

Mr. Walter: We just wanted to see how this was made; that is all.

By Mr. Holden:

Q. You said a few moments ago, on cross-examination, that Minnesota construction was not to be classed as light construction. What can you say, briefly, about the characteristics of construction of railroad lines in the State of Minnesota?

A. Through the greater part of the State the lines necessarily follow the valleys and along the edges of lakes, and Minnesota has a very large number of lakes, making it bad ground to build railroads upon, on account of the settlement which takes place. That is more particularly true of Minnesota than any other state we pass through.

Q. The Great Northern lines are quite largely in the Northern half or the Northern two-thirds of the State of Minnesota, are they not?

A. Yes; you would call it about the northern two-thirds, I suppose.

Q. And is it not a fact that there is a very large number of meandered lakes in the State of Minnesota, and a much larger number of other bodies of water, and marshes, wet country, generally speaking, throughout that northern two-thirds of the State?

A. Yes, that is true.

Q. It has been stated that the states of Minnesota, Wisconsin and Michigan present as much, if not greater difficulties in the way of securing a permanent and stable road-bed, than most any other State in the country. What is your judgment?

A. I think that is true. I have very little knowledge of Michigan, but have of the Northern part of Wisconsin and all of Minnesota, and I think there is more difficulty in securing a good foundation for a railroad through Minnesota, and especially the northern half of Minnesota, certainly, than any other of the states we pass through. I should add to that the nature of the material in a great many of the lines in Minne-

sota, especially those in the neighborhood of the Iron range are very unfavorable to the construction of railroads, on account of being largely a red clay.

Q. Referring to your estimate put in in the Spokane case: You stated that that showed an average per mile of main track of $62,000, is that right?

A. $62,511.

Q. Now, how is that average arrived at—or, to state what I have in mind—that is the average of the total, which includes all of the facilities along the line, as of that date, as shown by that estimate?

A. Yes, sir; and is an average obtained by dividing the miles of main track—not the miles of total track.

Q. Now, the present estimate, omitting items 36 to 39, you say shows approximately $75,000 per mile?

A. Yes, sir; $75,360.

Q. What is the difference in the totals of your Spokane estimate and your present estimate?

A. $134,473,400.

Q. Now, of that $134,000,000 how much is accounted for by new work, new construction, new material, new investment, since the Spokane figures were made?

A. About $61,000,000.

Q. That leaves, in round numbers, $73,000,000 yet to be accounted for; and of that will you state wherein lies the difference?

A. It practically all lies in the item of general and legal expenses and interest.

Q. Outside of those two items, substantially your figures agree with the Spokane figures when the new investments are taken into consideration, since the Spokane figures were made?

A. Yes, sir.

Q. Now, Mr. Hogeland, to make it perfectly clear, in bringing out these average figures per mile, in either of these estimates, those are not limited to the mere cost of constructing a mile of track, but includes the total figures—not only the cost of all of the land, but the cost of all the structures on the land, whether it be track or grade, or whether it be buildings, or whatever it may be—these gross figures per mile include all of the facilities which the railroad has for operating purposes?

A. Yes, sir; and including equipment, which you did not mention.

Q. Yes; I omitted to mention that. And includes also the

equipment. Now, I should have asked you before—When were these figures made up for the Spokane hearing?

A. They were made up in the early part of 1907. I think the hearing there at Portland was about the middle of May.

Q. And over what period of time have you had this matter under consideration—I mean this matter of determining from your records, and your own knowledge and experience, these figures representing what it would cost to reproduce the Great Northern lines?

A. I should say practically four years.

Q. What was the first occasion which arose whereby you were called upon to give the matter consideration along these lines?

A. I think the first was in connection with the valuation in North Dakota, which took place several years ago. While I did not prepare a complete statement, a great deal of the information was gotten together in our office, but the work began in earnest in the early part of 1906, when we were called upon by the Railway Commissioners of Minnesota to prepare a valuation or a statement of the cost of reproduction of the lines in Minnesota, and from that time on it has been continuous work, both as to different states, and as to the system.

Q. The state authorities of Minnesota called upon each railroad in the state to return their judgment of the cost of reproducing their lines in the state, did they not?

A. Yes, sir.

Q. And they had prepared, printed and presented to each carrier in the state, blanks containing a classification of the different items, quite similar to those adopted here, did they not?

A. Yes, sir.

Q. And that was done under the direction and supervision of the engineer, Mr. Morgan, employed by the state authorities for that purpose?

A. Yes, sir.

Q. And in order to fill out those blanks, that called upon you and your company to make a beginning to ascertain figures in relation to each of the different items covered by the statement? That is true?

A. Yes, sir.

Q. What were the circumstances under which the Spokane Exhibit was made up? I direct your attention chiefly to these items that you say embrace the chief differences—the legal and general expenses, and the rate of interest?

A. Well, I can say as to that, that we were not able to give it as full consideration, before preparing that, as we have been able to give it since.

Q. And that subsequent consideration and change in your figures, as I understand you, has been the result of further conference with other officials of the company—other people?

A. Yes, sir; with those who had a better knowledge of those particular subjects.

Q. And during the intervening period of time, the examination and re-examination of your own records, has been going on by a considerable force?

A. It has been going on constantly by a considerable force.

Q. And the result has been the working out, not only of the main exhibit, but also the supplementary exhibits based upon the records?

A. Yes, sir.

Q. You spoke about the cost of the Portland and Seattle, in response to some of Mr. Teal's questions, and that that present average cost per mile does not include equipment, that is true, is it?

A. Yes, sir. The figures which Mr. Teal mentioned, in round numbers, is my understanding.

Q. And to what extent do those figures include the facilities, such as passing tracks, buildings and water stations? Are those all completed on that line?

A. Yes, I think it covers those things pretty completely.

Q. You think those have been pretty well completed?

A. Pretty well completed.

Q. Are there any other items that occur to you, except these final bridges and culverts that you referred to, which are not completed yet?

A. No. Those are the main items. There are many jobs of rip rapping, but those are the principal items.

Q. How about the facilities from Pasco north to Portland up to June 30, 1908. The work was wholly incomplete there, was it not?

A. You said Pasco to Portland. You mean—

Q. Pasco to Spokane.

A. Yes; that was wholly incomplete at the time this estimate was made. I understood Mr. Teal to refer to the part between Pasco and Portland in his questioning.

Q. When was the Cascade Tunnel built?

A. It was building during the years 1897, 1898 and 1899.

Q. And it took about how long to construct it?

A. Between three and four years.

Q. Does that have a bearing upon your statement that, for an economical method of building from the Eastern terminals to the coast, you would still, if you were going to do it over again, build the switch-back over the mountains?

A. Yes, sir; for the reason that you could not get your machinery and your outfit in there to build your tunnel, until you had railroads reasonably close to the tunnel.

Q. Now, speaking on that subject. You say to a certain extent there are quantities embraced in certain grades, included in your present figures of quantities on other grades. Abandoned grades are not included. Now what is the reason for including some and excluding others?

A. That is because I only considered it fair to include grading on such portions of the line that had been abandoned and it seemed to me economical to build again, in the case of the reproduction of the system. That would be principally, because the original lines in such places were principally light construction. They were originally built as temporary, and by doing it that way you would be able to get the heavy equipment in necessary to carry out the heavy work, and the whole would be carried out more enonomically by doing the work again the same way.

Q. You have given individual consideration to the different places and different grades where temporary line had been built and then later the final line had been re-located?

A. We have considered each one separately, and only included those that in my opinion should be included for that reason.

Q And if the final line were built in the first instance, your judgment would be that a much less economical result would be arrived at?

A. Why, yes, sir; and it would not only be that—it would retard the completion of the whole thing.

Q. And necessarily retard the day when the commercial income would begin to make an appearance on the right side of the ledger?

A. Yes, sir.

Q. You spoke, I think, of a figure which showed that there were 6,195,900 cubic yards of such embankments, in your present figures?

A. Yes, sir.

Q. I simply wanted to direct attention to page 9 of Exhibit 15, where the total cubic yards of earth, hard pan, loose rock and solid rock for the system are shown to be over 217,000,000 cubic yards, and that this amount of so-called abandoned right of way is only 6,000,000 out of 217,000,000. How much is the yardage of the switch-back?

A. 245,500.

Q. That is the yardage of that part of the line that was abandoned when the tunnel was completed?

A. Yes, sir.

Q. Now, Mr. Hogeland, how have the new lines of the Great Northern road ordinarily been built? You spoke as to one or two that were built under separate organizations. I wish you would state what the general fact has been in that regard?

A. In nearly every instance they have been built under separate organizations.

Q. You mean by that, that a separate company has been formed, usually, has it not, in the state where the work was to be done.

A. Yes, sir; usually that way.

Q. And a separate financial organization and arrangement for producing the money has been made for the company that has been building the particular extension or extensions?

A. I cannot tell you much about the financial arrangement, but I know that they have been built under separate organization.

Q. Under separate organization. That was the chief point I had in mind. Now, what has that to do with the question of the carrying charges for the material going into the construction of such lines?

A. I think that was the reason for charging tariff rates on material, men, and outfits.

Q. Is it not a fact that the Interstate Commerce Commission has required, and still requires, that in every case where a line has a separate organization, any carrying of material for it by even an affiliated line or an associated line must be carried at tariff rates only?

A. That is my understanding. I am not fully posted on matters of that kind.

Mr. Walter: Don't you think if they do that throughout these eight years of building that the parent corporation, the Great Northern Railway Company, would have something to show in the way of revenue, if it did charge the full tariff rates to the construction company.

The Witness: Not during the period of reconstruction, because your railroad would be in such an imcomplete condition that I do not believe you would have anything over operating expenses.

Q. That is exactly the question I was going to ask you. Given the property, we will say, in Minnesota—a completed and matured line as it is to-day—and the construction of a branch line in North Dakota by a separate company, that you speak of: Is that a parallel case, so far as the cost of carrying material, to a case of reproducing your system in the period of eight years and moving material over a half-constructed line, half-ballasted, with half its facilities?

A. Why, no; the conditions are entirely different.

Q. And your reason, as I understand it, for claiming that tariff rates over a line under construction present a reasonable basis of charges results in the expensive character of the transportation, while a line is in that condition?

Mr. Teal: I would like to make an objection. This witness has never stated that he believed the tariff charge presented a reasonable estimate of a method. He simply said that he used it. Because what he knows he knows. But he has never made any such statement as that.

Mr. Holden: I thought he did, Mr. Teal.

Mr. Teal: No, sir; he never has.

Mr. Holden: I will ask him the question then.

Q. In determining the question of what would be a fair charge for moving construction material over the line under construction, what has been your reason for using tariff charges? I wish you would make perfectly plain what that basis is.

A. Primarily I thought it was right to use tariff charges, because for any material or men transported over other lines you would have to pay tariff rates, and a considerable proportion of your charges would be over other lines. But for such as you transported over your own line under construction, it would certainly cost very much more than it would on the line fully equipped for operation, and I therefore considered that even for such portion of the charges, it was as fair as any other way to take the tariff rates.

Q. That is exactly my understanding of your testimony. Now, speaking about the transportation of men to new work. Where do the men ordinarily come from—or, stating it in another way, do they always come from the terminus of your line?

A. No. The principal labor markets on our line are St.

Paul, Minneapolis, the head of the lakes—Duluth and Superior—Butte, Spokane and the coast points.

Q. Are you now, and have you always been, able to secure the labor necessary for new work at these labor markets?

A. Only after continual efforts and continually sending men to the work to replace those who moved on.

Q. Have you had at times to get men at other points off of your line, and transport them to the work on foreign lines?

A. Yes, sir.

Q. Can you illustrate that by any cases you have in mind?

A. The construction of the Billings and Northern in Montana—a great many men were brought from St. Louis over the Burlington system; a great many men were sent out from St. Paul and Minneapolis over the Northern Pacific.

Q. Why did you go to St. Louis to get labor?

A. At that particular time that was the best available market.

Q. Did you have to pay tariff rates over the Burlington line from St. Louis?

A. Yes, sir.

Mr. Walter: You don't mean to say first class passenger rates?

The Witness: No; that would depend on how they were sent.

Mr. Walter: Much less rates than the ordinary first-class passenger travel.

The Witness: I think they travel on a party rate.

Mr. Walter: Party rate excursion ticket.

The Witness: They traveled under the same condition, is my understanding.

Q. And you have utilized that kind of rates in figuring the transportation charges in this case?

A. Yes, sir.

Q. I wish you would turn to your Exhibit No. 16, Mr. Hogeland. You have called my attention, since yesterday, to a slight mathematical error in one or two of the figures there, which I would like to have you explain, so that it will be clear.

A. We find that in two of the items under "Total charges" there has been a clerical error in taking them out of the construction books.

Mr. Walter: What is the number of the exhibit?

The Witness: No. 16.

The Master: Cost of grading.

The Witness: Yes, sir; cost of grading.

Q. Just indicate what items they are.

A. In column 14, under "Total charges," the third item, being for the Brookston to Ellis line, we find that there is an error of $38,004, which would reduce the $396,539 by that amount. We also find in the sixth item, being the line from Kelly Lake to Nashwauk an error of $16,267, which would reduce the $99,983 by that amount; making a total correction of of $54,271. Deducting that from the $21,027,679 at the foot of column 14, leaves a total of $20,973,408. Dividing that by the total yardage—46,903,481—makes an average cost per yard of 44.72 cents, instead of 44.8 cents.

Q. Those are the only two errors found after the re-check of that exhibit?

A. After a complete check of the whole thing, which has just been completed.

Q. Now, speaking about ties for a moment: What is your idea in reference to the cost of reproducing the ties shown in the system, twenty three million and odd, as compared with the cost of reproducing other items, for instance, such as steel?

A. It seemed to me that ties were on altogether a different basis than any other material entering into the construction, for the reason that for all of the Eastern portions of the system at least, tie timber is gradually being exhausted; and considering a period of reconstruction extending over eight or more years, that, in my mind leaves no doubt but what the price of ties will advance materially.

Q. You treat the tie question, then, differently than other questions of construction material? You don't figure any advance on steel or anything of that kind, for instance?

A. No, sir; not at all.

Mr. Teal: Didn't figure any reduction on steel either, did you?

The Witness: No, sir.

Mr. Walter: You didn't take into consideration the fact that the ties you already had in your railroad had depleted the source of supply in Minnesota?

The Witness: No, sir.

Q. Now, do your figures contain any charge for the cost of getting the money to reproduce this system? In other words, if I understand the basis (if I may testify for a minute, Mr. Teal, just to call the attention of the Master and yourself) the assumption made here is that the money is obtained

apart, and there are no items in here such as discounts or commissions?

A. No, sir.

Q. And none of that kind has been included in your figures showing the cost of reproduction?

A. No, sir.

Q. And no charge against the work for the cost of getting the money that might be incurred, if an enterprise of this kind were undertaken?

A. No, sir.

Mr. Holden: I have one more exhibit which was handed to me this morning, which I would like to offer in evidence.

(Paper marked as Complainants' Exhibit 21 (Hogeland).